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Key considerations for the success of Medical Education Research and Innovation units in Canada: unit director perceptions

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Abstract Growth in the field of medical education is evidenced by the proliferation of units dedicated to advancing Medical Education Research and Innovation (MERI). While a review of the literature discovered narrative accounts of MERI unit development, we found no systematic examinations of the dimensions of and structures that facilitate the success of these units. We conducted qualitative interviews with the directors of 12 MERI units across Canada. Data were analyzed using qualitative description (Sandelowski in Res Nurs Health 23:334–340, 2000). Final analysis drew on Bourdieu's (Outline of a theory of practice. Cambridge University Press, Cambridge, 1977; Media, culture and society: a critical reader. Sage, London, 1986; Language and symbolic power. Harvard University Press, Cambridge, 1991) concepts of *field*, *habitus*, and *capital*, and more recent research investigating the *field* of MERI (Albert in Acad Med 79:948–954, 2004; Albert et al. in Adv Health Sci Educ 12:103–115, 2007). When asked about the metrics by which they define their success, directors cited: teaching, faculty mentoring, building collaborations, delivering conference presentations, winning grant funding, and disseminating publications. Analyzed using Bourdieu's concepts, these metrics are discussed as forms of *capital* that have been legitimized in the MERI *field*. All directors, with the exception of one, described success as being comprised of elements (*capital*) at both ends of the service-research spectrum (i.e., Albert's PP–PU structure). Our analysis highlights the forms of *habitus* (i.e., behaviors, attitudes, demeanors) directors use to negotiate, strategize and position the unit within their local context. These findings may assist institutions in

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developing a new—or reorganizing an existing—MERI unit. We posit that a better understanding of these complex social structures can help units become savvy participants in the MERI *field*. With such insight, units can improve their academic output and their status in the MERI context—locally, nationally, and internationally.

Keywords Bourdieu · Medical education · Qualitative research · Research · Scholarship · Unit

Introduction

The field of Medical Education Research and Innovation (MERI), a field with a history extending from the mid-1950s (Kuper et al. 2010), has generally been difficult to describe. Even its very name has been a source of debate. Gruppen named the field Medical Education Research and Development (MERD) (2008) to acknowledge that achievements in this field are not purely research-oriented.[1] In this paper, we modify Gruppen's label, changing "Research and Development" to "Research and Innovation," to incorporate Boyer's (1997) expanded definition of "scholarship" which includes innovations. In so doing, we acknowledge that the activities recognized in the MERI field are wide ranging, including discovery (i.e., research), integration, application, and teaching (van Melle et al. 2012).

Members of the MERI community have argued, and in many cases successfully, for institutionally-supported means for encouraging participation in this field of inquiry. This work has taken many shapes. It includes having professional promotion tracks retooled to acknowledge excellence in teaching and/or educational innovation as valid pathways for advancement (Hofmeyer et al. 2007; Klingensmith and Anderson 2006; Louis 2000). It includes offering Masters and PhD programs in MERI or Health Professions Education (HPE).[2] It also includes the development and conferment of teaching and research awards specifically directed towards medical education and medical educators[3] (Huggett et al. 2012; Simpson et al. 2007; Steinert et al. 2012; Viggiano et al. 2000).

[1] Van Melle et al. confirm this point in their 2012 position paper, stating: "Understanding education scholarship as encompassing both ***research and innovation*** (original authors' emphasis) is important since it expands our consideration of what can be 'counted' as legitimate academic work." (2012, p. 4).

[2] Examples of Masters and PhD programs in MERI or Health Professions Education (HPE):
University of Ottawa:
http://www.grad.uottawa.ca/Default.aspx?tabid=1727&monControl=Programmes&ProgId=553
University of Dundee:
http://www.dundee.ac.uk/postgraduate/courses/medical_education_mmed.htm
University of Illinois (at Chicago):
http://chicago.medicine.uic.edu/departments___programs/departments/meded/educational_programs/mhpe/
University of Toronto (OISE):
http://www.oise.utoronto.ca/lhae/Programs/Higher_Education/Degrees_Offered/Masters.html
Accessed: Feb. 25, 2013.

[3] Examples of teaching and research awards specifically directed towards medical education and medical educators:
CAME: http://www.came-acem.ca/default_en.php
AAMC: https://www.aamc.org/initiatives/awards/
Accessed: Feb. 14, 2013.

In addition to these efforts, many institutions across North America and Europe have consolidated these efforts and established MERI units.[4] The Society for Directors of Research in Medical Education (SDRME) lists 50 directors (or Leaders) of MERI units in North America, with an additional 15 for international units (SDRME 2013). Given that the MERI field of inquiry is in its infancy (especially in comparison to its "name" cousins—Medicine and Education), the proliferation of these units is noteworthy. But the path to developing and successfully maintaining such units is not well documented. Some MERI units have provided descriptions of their efforts, wherein they outline some of the successes and challenges faced in developing their respective units (Elam 2004; Irby et al. 2004; Nierenberg and Carney 2004; Thomas et al. 2004). These locally focused reports provide the community with valuable insights into the development of MERI units in individual contexts.

However, research has yet to look across the entirety of MERI units to systematically examine what criteria facilitate and obstruct the successful development of these units. Indeed, little is known about the very definition of success in the MERI field and the contextual elements that support the attainment of that success. In our search of the literature, we were able to locate only two papers that discuss the overarching factors enabling and constraining MERI units—the preface to the *Academic Medicine* special edition dedicated to case study descriptions of MERI units (Arnold 2004) and a commentary piece (Gruppen 2008). In her preface, Arnold describes the similarity of some characteristics across the 8 MERI units depicted in the special edition. She summarizes these similarities stating that "strong leaders, clarity and vitality of purpose, collaborative approach to research, and programs to nurture current and future medical educators' ability to generate quality scholarship in medical education" (Arnold 2004, p. 968) bode well for the success of MERI units. However, Arnold does not investigate what qualifies as success for these units. And, in terms of describing the structures that support success, Arnold cautions that her analysis does not convey how the similarities identified intertwine to create a foundation for enabling success. Gruppen's (2008, p. 122) commentary warns that units need to find a "dynamic balance on the research-service continuum" in order to be successful. But here, again, the definition of success for MERI units and the identification of structures that enable that success are not described.

The missing description of the components of and contextual factors impacting on MERI success is a body of research our study team had immediate need to address. The administrative members of our Canadian medical school wanted our MERI unit to model the "best practices" that other units had developed to achieve success. However, while we had anecdotal data from colleagues at other units, we did not have the evidence-based findings our administration was seeking. To address this gap, our research team set out to answer two key questions: (1) How is the "success" of a MERI unit defined, and (2) what structures (organizational or otherwise) have been implemented at MERI units to enable that success.

To answer these questions, we conducted a qualitative study of MERI units. Given that our site is Canadian and that Canadian medical schools housing MERI units are different than American or European schools, we limited the focus of our inquiry to the Canadian context. We interviewed Canadian MERI unit directors to solicit their perspectives on what is defined as success for a MERI unit, and on how to achieve that success (i.e., what kinds of structures were implemented to facilitate achieving that success). The purpose of this

[4] In this paper, we use the term "unit" to refer to the various institutional designations and organizational structures associated with MERI groups (i.e., centres, departments, programs, extra-departmental units, divisions, offices, etc.).

Table 1 Descriptions of individual directors and units

Question	Aggregated data
1. What is the status of your unit within the university? (i.e., department, extra-departmental unit, other)	Centre within the Faculty of Medicine = 2 Program = 2 Extra-departmental unit = 4 Support unit = 1 Division within the Faculty of Medicine and Dentistry = 1 Department = 1 Unit within the Office of the Dean of Medicine = 1
2. Where does your financial support come from? a. Are you financially protected or are you on soft money? (Note: Not all directors described their definitions of hard or soft money) b. Do the clinical departments support the unit financially?	*A* Are you financially protected or are you on soft money? Hard funding only = 3 Funded mostly with hard money, with some soft support supplementing that funding: 5 Funding is from hard and soft sources = 3 Small amounts of hard funding, with soft funds supplementing = 1 When provided, hard money is described as Recurring budget line = 1 Internal faculty-based funding = 3 Dean's office budget line = 2 Clinical department funding = 1 University operating funds = 1 When provided, soft money is described as Funding from post-graduate education = 1 Funding from Faculty of Medicine = 1 Consultancy work = 1 Grant funds = 2 B Yes: 3 No: 8 Answer not provided: 1
3. What year did you attain your current position as director of your unit?	2009–2013 (0–5 years as director) = 3 2004–2008 (6–10 years as director) = 4 2003 and earlier (+10 years as director) = 4 Not applicable = 1
4. Please list your academic/professional degrees (Note: Some directors have obtained more than one terminal degree)	MD = 5 PhD = 8 MEd = 5
5. For directors with PhDs, how many years have you been working in the field of Medical Education as a PhD?	0–5 years = 1 6–10 years = 1 11–15 years = 2 16–20 years = 2 +20 years = 2 Not applicable = 3
6. Please list the number of MDs and PhDs who would be considered members of your unit. (Note: One director did not wish to distinguish between MD/PhD members; three did not provide MD information; one did not provide PhD information)	0–5 MD = 5 6–10 MD = 1 10+ MD = 2 0–5 PhD = 8 6–10 PhD = 1 10+ PhD = 1
7. Are your PhDs hired on contract or tenure-track?	Contract = 2 Tenure-track = 5 Mixed = 5

Table 1 continued

Question	Aggregated data
8. Are your PhDs members of a union or party to a collective bargaining agreement?	Yes = 10 No = 1 I don't know = 1
9. Do you have access to or can you recruit graduate students?	Yes = 12 No = 0
10. Do you have a Graduate Program in Health Professions Education (MEd/MA, PhD)?	Yes = 7 No = 5
11. Do you run an internal Medical Education Research Grants Program?	Yes = 4 No = 8

Due to variability in how participants completed the short answer questionnaire, some aggregate data elements are not available for all units. Notes are provided under the affected questions to describe missing data elements. For D10 and D12, who shared directorship status, we report only the data from D10 because: (1) D12 often replied in interviews with deference to D10's answers, explaining that D10 had greater information or insights given his status in and longevity with the unit; and (2) D12 was unable to answer all the short answer questions. In this way, data from the unit represented by D10 and D12 is only included in the aggregated data once, thereby not giving that unit additional weight. For D15 and D16, only a single short answer questionnaire was submitted and so the data from that unit is assumed to represent the opinions of both of these directors. In these ways, the data presented in this table report findings only once for each of the 12 MERI units

study was not to generate theory, nor to evaluate the success of these MERI units. Instead, our goal was to describe unit directors' perceptions of the dimensions of and structures that support the success of a MERI unit.

Methods

The research methods used in this study were approved by the research ethics board at our local institution. All participants provided informed consent.

Data collection

Our aim was to interview the directors of all the MERI units across Canada. We approached individual clinicians and educators, from all 17 Canadian medical schools, who were active in the Canadian MERI field and asked (1) if their school had an existing MERI unit; and (2) if yes, to name the director of the unit. These clinician and educator informants identified 16 units (one school had no formal unit in existence), and 18 directors (one school reported having a shared leadership structure, and one school asked that the past director and current director both be included in a shared interview to ensure accuracy of responses).[5] We contacted each of the units and invited the directors to participate in an interview. Three directors declined our invitation to participate and our own unit was

[5] It should be noted that when a MERI unit existed, there was common identification of the director by all informants. That is to say, there were no discrepancies between informants vis-à-vis who was the director of the unit at their school.

excluded to minimize bias. Ultimately, we conducted 13 interviews with 14 participants from 12 units.[6] Interviews were held in 2011 and 2012.

Interviews were scheduled at the convenience of each participant, and thus followed a convenience-based ordering. The interviews had a two-part structure. First, participants were sent, via email from the study's research assistant, a list of 11 short answer questions (see Table 1 for questions). These questions asked participants to describe specific demographic aspects of themselves as director and particular structural elements of their respective MERI units (e.g., How many years have you served as director of the unit? Does your unit have an internal, medical education research grant program?). Participants were asked to respond to the questions in the form provided and return it to the research assistant prior to their telephone interview. The study's research assistant collected the completed short answer forms and anonymized any participant identifiers before sharing this data with the research team. In Part 2, telephone interviews were held, following a semi-structured interview protocol (see Appendix for sample questions) and conducted by a qualitatively trained research assistant. The interviews lasted an average of 50 min (ranging from 31 to 75 min). They were digitally recorded and transcribed by a third-party transcriptionist at which point all identifying details were removed from the transcripts and replaced with numeric identifiers. Participant identifying codes were created by the transcriptionist, then maintained by the RA to ensure accurate cross referencing. The study's research assistant reviewed the transcripts for accuracy.

Data analysis

We analyzed the data using a qualitative description approach (Sandelowski 2000). This approach does not set out to prove preconceived theory or to develop theory. Instead, qualitative description supports researchers' efforts to describe and thematically cluster participants' reports of their personal experiences, drawing themes and categories directly from the participant data. This approach also acknowledges that research rarely employs single methodologies, to the exclusion of all others. As Sandelowski states, research is rarely so "pure." In this study, we augmented this descriptive approach by implementing aspects of Grounded Theory. Specifically, the influence of Grounded Theory came during data analysis, when we employed three iterative cycles of coding—"open", "axial" and "selective" (Glaser and Strauss 1967).

During the cycles of open coding, two members of the research team [LV & EB] and the study's research assistant independently read through the data looking for emergent themes. Meetings were then held to discuss the themes developed by the three-member coding team. During these meetings, the team worked towards building consensus on the emergent themes and conceptual categories found in the transcripts. During the cycles of axial coding, the team continued to code the transcripts using the emergent themes developed during open coding, but also began to build thematic hierarchies and identify relationships between the themes. Finally, during the cycles of selective coding, the thematic hierarchies were further refined to the eventual elaboration of thematic networks through a delimitation of the data and theme saturation. Regular team meetings were held to resolve discrepancies, to review deviant cases (Silverman 2001), and to build a common understanding of the data. In total, across all three sets of analysis cycles, 24 team meetings (totaling 47.5 h) were held to review data and vet coding structures. Ultimately, the team

[6] D10 and D12 were interviewed separately but shared leadership of the same unit. D15 and D16 were interviewed together, and have both acted as director of the same unit.

arrived at 25 major themes, many of which contain a number of sub-themes. In order to qualify as a final theme, the code had to be present in over half of the transcripts. To facilitate cross-referencing and data retrieval, the final coding structure was applied to the complete data set using NVivo9 software for qualitative data analysis (QSR International 2012).

Once all data analysis was completed, the research team sought theoretical frameworks that could be used to inform interpretations of study data. After considering several theories from the social sciences (including Activity Theory and Actor Network Theory), it was decided to rely on Pierre Bourdieu's theoretical constructs. Bourdieu was selected because it (a) enabled the research team to better conceptualize the data, (b) reconciled some of the more unexpected participant comments (see introduction of "Results and Discussion: Part 2B" section), and (c) it enabled us to build on the findings from other researchers working in this area (see description of Albert's work in "Results and Discussion: Part 2B" section).

Confirmability was ensured through an audit trail consisting of data collection details (e.g., date/time of interview, duration, contextual influences), analysis of team meeting minutes, and revisions to the code definitions and coding tree. The audit trail followed the Study CV format (Varpio and St-Onge 2011). Triangulation was achieved in two ways: using 3 coders ensured investigator triangulation; and using the interview data of 14 participants from 12 separate units ensured data triangulation (Stake 2000). A variation on a member check activity (Schwandt 2007) was held at the 2013 Canadian Conference on Medical Education (CCME) at the Canadian Centers for Research in Health Professions Education (CCRHPE) meeting. At this meeting, a sample of study findings was presented to the directors of Canadian MERI units who attended the meeting. This activity was completed to honor the requests of some study participants who, during interviews, asked that the data be shared with them prior to dissemination of finding via presentation or publication.

Results and discussion

We present study results, and analysis of those results, in three parts. First, we report the data from the structured, short answer portion of our protocol (Part 1). Then, reflecting our two-part research question, we present findings collected via the semi-structured interview protocol in two parts. First, we present the descriptions from unit directors of what constitutes "success" for a MERI unit (Part 2A). Secondly, we describe the structures that participants reported as supporting or obstructing achievement of that success (Part 2B). In all three parts, we combine Results and Discussion to more clearly present the progression of the data findings and analysis.

Part 1: description of director demographics and some MERI unit structural elements

To preserve the anonymity of study participants, we present participant responses describing themselves and the structures of their units in aggregate form (see Table 1). These data were collected solely through the short answer portion of the study protocol.

As this table illustrates, there is great variability across MERI units in terms of both director demographics and structural elements of the units. Indeed, each unit has its own unique configuration.

Part 2A&B: description of success and the structures that enable it

We frame the following results and associated discussions with the theoretical concepts of French sociologist Pierre Bourdieu and his concepts of *field*, *habitus*, and *capital* (Bourdieu 1977, 1986, 1991). We also rely on the research conducted by Mathieu Albert (Albert 2004; Albert et al. 2007), investigating the MERI *field*.

Bourdieu defines a *field* as a social space wherein social agents (be they people, institutions or organizations) interact. MERI can be described as a *field*, or social arena, where educators, schools, professional organizations, and other agents participate in the "production, circulation, and appropriation of goods, services or knowledge" (Albert 2004, p. 951) related to medical education. Social agents within a *field* compete with each other, vying to maintain or improve their social standing. In the MERI context, social agents are engaged in a continual struggle to advance (or not lose) their standing within the hierarchically structured positions in the *field*. Be it to improve their professional reputations (a goal for educators), to improve their academic ranking (a goal for schools), or to acquire political influence (a goal for professional organizations), agents are continually maneuvering to solidify their status in the MERI *field*.

Within a *field*, agents compete for social position through the acquisition of *capital. Capital* refers to the resources that an agent collects to increase her standing within the *field*. There are many different kinds of *capital*. We will refer to three kinds of *capital*: economic (securing money and other financial assets, such as a MERI researcher winning a grant); social (having associations and networks with the "right" social agents, such as when a medical school hires a famous educator); and cultural (having knowledge and language skills, such as a clinical educator taking a graduate degree in MERI). What qualifies as *capital* varies between different *fields,* and the definition of legitimate *capital* in a *field* is part of the struggle within which social agents participate. For example, many MERI agents have advocated for a broader definition of scholarship, so that activities falling outside traditional research (i.e., excellence in teaching) would be accepted as valuable (or legitimate) forms of *capital*.

The amount of *capital* that a social agent is able to accumulate is influenced by her *habitus*. *Habitus* is the set of dispositions held by a social agent. To illustrate, consider a physician educator. This agent's *habitus* is structured by past experiences (e.g., academic experiences, including medical school) and present circumstances (e.g., academic and clinical rankings); and actively structuring the agent's current actions and practices (e.g., the scope, structure and topics of the educational innovations she develops). Through *habitus,* an individual agent carries her personal, cultural, and professional history within her. That history influences the agent's present circumstances, and shapes her future. *Habitus* is the "feel for the game" that social agents bring to the *field* in order to vie for *capital.*

In his research, Mathieu Albert has employed Bourdieu's constructs to analyze the MERI *field* (Albert 2004; Albert et al. 2007). In his model, Albert describes the MERI *field* as consisting of two poles: production for producers (PP) and production for users (PU) (see Fig. 1). Researchers at the PP pole argue that scientific inquiry should strive to build knowledge that is acknowledged as legitimate through the processes of peer-review. At the PP pole, members attribute legitimate *capital* to research disseminated via peer-reviewed publications and presentations, and funded by peer-reviewed grants.

At the PU pole, members have a highly practical orientation. Legitimate *capital* is accorded to activities that address the needs of the users of knowledge. At this pole, peer-review is not considered the ultimate means for acquiring scientific legitimacy. Instead, the

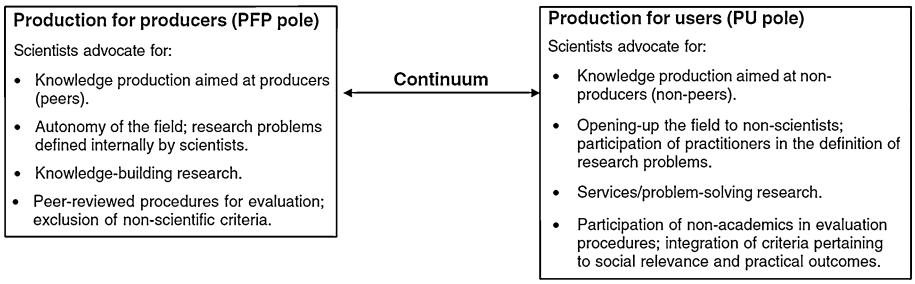

Fig. 1 The two poles of research in the field of medical education research. Reproduced exactly from Albert et al. (2007). Note the PFP pole is referred to as the PP pole in this paper to mirror the acronym for PU

development of innovations and the ability to provide answers to real, practical questions is deemed legitimate *capital*. The dissemination of findings via reports, be they for administrative or public audiences, are legitimate forms of production.

Albert describes the PP/PU poles as resting on either end of a continuum. Agents in the MERI *field* will locate themselves along the continuum. In his examination of MERI researchers, Albert posits that these agents will inevitably engage in production that is aimed at users and, at other times, that is aimed at producers.

These concepts (i.e., *field, capital, habitus,* and the PP/PU continuum that exists within the MERI field) help to frame our discussion of director descriptions of success and the structures that enable it.

Part 2A: definitions of "success"

By seeking to describe how the directors of MERI units define success, our research team was essentially looking to identify the kinds of *capital* that unit directors seek to collect. In essence, we were asking them to describe the different kinds of resources that they could compete for to increase the standing of their unit within the MERI *field*. Our participants described six distinct metrics of success (see Table 2).

As these definitions and examples illustrate, the unit directors describe markers of success, or types of *capital,* that straddle both the PP and PU poles. Although some directors emphatically labeled their unit as a "service centre" and others as a "research unit", all the directors described success as being comprised of elements at *both* the PP (e.g., publications) and PU (e.g., teaching) poles, with the exception of just one director, who described success using only metrics from the PP pole. Again, we must refer back to Albert and describe these metrics of success as standing across the continuum. While some criteria are more clearly at one pole or the other, many could conceivably be placed at various locations across the continuum. It is important to recall that these forms of *capital* are not statically located. They move along the continuum as the *field* evolves and positions of social agents change. Thus, while some metrics of success may not be considered to be at the PP pole today, in time they may migrate to that pole.

What is clear from these data is that MERI unit directors acknowledge that success can be described as individual elements (different forms of *capital*), and those elements of success are to be acquired from across the PP/PU continuum.

Table 2 Metrics of success as described by participants

Name of the metric of success	Definition of the metric of success developed by research team	Data example of participant descriptions of the metric of success
Teaching	Achievement as measured by the unit members' contributions to instruction/training/faculty development work	"I have a cross appointment with our Faculty of Education, and I supervise graduate students, and I teach in the graduate programs and education. And then, within the Faculty of Medicine, I also supervise graduate students and I teach in the postgraduate and undergraduate curriculum. So I think all those areas would be examples of productivity: teaching […], supervising, mentoring the undergraduate students and [graduate] students." (D10)
Faculty mentoring	Achievement as measured by helping faculty get promotions/tenure/become more successful medical educators as defined by their local context. (Includes reference to the mentorship of clinical faculty)	"We have all sorts of clinicians who don't want to wash test tubes and don't want to start competing with the Cochrane Collaboration on doing clinical trials […]. They're interested in education. They want to sort of cut their teeth (pause). They want to move up the academic ladder in education. (D2)
Building collaborations	Achievement as measured by developing research relationships/partnerships/cooperation with others (be the others at departments, units or faculties within the local context, or at different universities)	"They [several faculty Deans] made the point that we should be tracking the degree to which we're building new networks and partners, collaborative partnerships or educational work. Whether it involves research grants or not, that creation of new partnerships is an important tracking [criteria] from their point of view. So we've started to institute that." (D1)
Delivering conference presentations	Achievement as measured by the presentation of research findings (e.g., conferences, meetings, invited talks, grand rounds, etc.)	"Success for us would be ongoing programmatic research with a recognizable kind of five, ten year plan for that program of research, peer-reviewed funding to support it, peer-reviewed dissemination of it." (D4)
Winning grant funding	Achievement as measured by winning research grants/peer-reviewed funding	"The metrics were to have two successful external grants. So, for example, we had formed four research working groups, each one tackling a different research problem or question. Our goal was for at least two of those groups to be successful with external grants." (D5)
Disseminating publications	Achievement as measured by research articles/scholarship articles/peer-reviewed journal submissions (includes reference to impact factors, citation rates, etc.)	"I guess for me success is defined both in terms of scholarly output, which is research grants, research studies, publications and presentations" (D9)

Part 2B: the habitus supporting the achievement of success

Following these descriptions of success, we asked participants to describe the structures that had been put in place in their unit to help achieve this success. We had anticipated that directors would describe why they were organized, for example, as departments and not as extra-departmental units, or how their reporting structures were intentionally designed to support their success. In hopes of getting a broad range of reflections, we did not explicitly prompt participants to describe such structural aspects. Instead, we asked very open questions (see Appendix). With these questions, we anticipated receiving data related to organizational and reporting structures, with perhaps some additional reflections on other means of enabling unit success.

But, while there was some reporting of different organizational or administrative structures, our participants focused their descriptions on the behaviors, attitudes, and demeanors they adopted in their local context to acquire the previously identified forms of *capital*. It seems that after having directors explain the forms of *capital* they sought in their local *field*, we had inadvertently prompted them to describe the forms of *habitus* they used to negotiate, strategize, and position the unit within their local context. Four themes emerged consistently across the data set, themes that describe elements of the *habitus* employed by the directors.

Advocacy work Our participants described an explicit understanding that the work their unit engaged in was often an "unknown quantity" for both the Faculties of Medicine and hospitals that they were affiliated with. For the unit to be successful, the directors acknowledged the importance of advocacy work. As one participant noted, successful advocacy enabled her[7] unit to acquire *economic capital*:

> "So any time you get Department Heads together who are focused on research and who are recruited as Department Heads because they have a background in research, you have to keep on putting the education piece in front of them. We've been very successful in embedding education excellence and scholarship of education into our strategic plan in the Faculty of Medicine […].If you don't do that work, you tend to get left by the wayside and not attract the money that you need to be successful." (D1)

As another participant noted, there are multiple venues through which unit members could raise the unit's profile:

> "If there's opportunities for [the unit's] PhD educators to participate in committees within the clinical disciplines, that might be a good opportunity to promote the work that we do and the services that we can offer, and also promote our expertise that we can bring as part of interdisciplinary research projects and programs. Also, our participation on curriculum committees at undergrad, post grad, and CME levels—I mean that's another opportunity for us to contribute our expertise, and bring our expertise to the table, and also to network and develop relationships with the clinical faculty." (D10)

There are multiple opportunities for advocacy, and the directors in this study described the need to harness these opportunities in order to locally advocate for their units.

[7] To mask the identities of the participants, all directors are referred to in the feminine and potentially identifying details have been removed from the quotations.

Promoting growth With the growing success of their units, the directors consistently acknowledged the importance of growing their units—both in terms of people and programs. Directors reflected that their previous experiences had taught them the importance of maintaining momentum. For the unit, maintaining momentum meant meeting the growing demand for the unit's services. Limited human resources, and specifically the need for more PhD trained educators, were recognized as limiting units' abilities to meet this demand:

> "It's [the unit is] generally under-resourced for meeting a lot of the sort of educational consulting needs of the wider Faculty. So we have a more limited role than we would like in that regard." (D11)
> "There are so many people now who have gotten to know about the [unit] and who realize that there is intellectual nurturing here for their research to really grow. We're very quickly reaching a capacity issue where we are going to need more PhD scientists if we are going to meet the increasing demand." (D4)

But growth in terms of personnel requires *capital*—specifically *economic capital*:

> "I think there's always more that we want to do and there's just not enough hours in the day. […] I'd love to hire more PhDs." (D9)

In addition to requiring more faculty members, the directors also commonly acknowledged the need to develop a graduate program (be it a Master-level program on its own or in conjunction with a PhD program) in Health Professions Education or Medical Education. From a Bourdieuian perspective, such graduate programs would further secure the unit's position within their local context (*field*). With these programs, they would be producing graduates, actively producing *cultural capital*.

Managing expectations Another way that the directors demonstrated their "feel for the game" was in their explicit descriptions of having to manage the expectations of the other social agents in the *field* who could influence the unit's status. From Deans of the Faculty and Clinical Department Heads, to Hospital administrators and Promotion Committees, the directors had to negotiate for the realization of their expectations. As one participant described:

> "A large part of what I find myself doing as the director is meeting, for instance, with the Dean to create a kind of a shared understanding of what he expects and what I expect will be the intersections in our mandates, so that we can both be satisfied. There's a strong educational component to that. So, for instance, I work to ensure that the knowledge building mandate that we have is well understood by the Dean's office as contrasted, for instance, with providing program evaluation service, a need which also exists but for which there is another office here that can fill [that need]." (D4)

By carefully managing the expectations of other social agents, the directors sought to ensure that the work completed in their units was locally recognized, and not curtailed by excessive extraneous responsibilities. Too many expectations would result in diminished quality of work—and that quality of work was essential to defend. As one director described, when asked to enumerate the unit's major stakeholders:

> "That's a really tough one (laughs), because it's basically *everyone* [participant's emphasis], you know. And in some ways you have to really manage your stakeholder base—because it is everyone […]. So [there are] very broad expectations across our stakeholders, from a very small and new unit, and the risk is that you try and do too many things for too many people and, in the process of that, you lose your focus on excellence." (D1)

Building relationships with individuals Directors acknowledged that it was important to build collaborations and relationships across the educational continuum (UME, GME, CME), and across the different departments of the hospital (e.g., Internal Medicine, Surgery, Pediatrics). But, while the directors had "an eye" on the diversity of their collaboration portfolios, they emphasized the importance of fostering collaborative, nurturing and fruitful relationships with *individuals*. This way of working is not structured into the units. Instead it is an approach that the directors have learned throughout the course of their careers and have implemented in the unit. As one of participant described:

> "Basically we're opportunistic, focusing on individuals who are doing interesting things […], to nurture and encourage clinicians who want to get involved in education […]. I will quite deliberately seduce individual clinicians into becoming members of our research teams […]. I find people, I ferret out people, I do my best to nurture people as individuals. […] These are individuals I nurture, I don't nurture blocks of organizations." (D2)

Conclusion

Interpreting these results through the theory-based lenses provided by Bourdieu and Albert, it becomes clear that the elements of "success" that MERI units seek to accumulate can be mapped across the PP/PU continuum. Those matrices of success (representing different forms of *capital*) address both poles at work within the MERI *field.* In their local contexts, in their immediate *fields,* directors describe having to advocate for their unit and the important, if somewhat unusual, work done and successes achieved there. Directors also report having to attend to the expectations of the social agents in their local context who position themselves at the PP or PU poles. Additionally, directors implement specific strategies to foster the success of their units. In other words, directors (as social agents) share certain aspects of *habitus* which enable them to negotiate for the *capital* that will lead to their success in their local *field.* These commonalities in *habitus* confirm the generative power of the structures of the MERI *field* and forms of *capital*.

MERI units are becoming increasingly common in medical schools around the world. They benefit the educational mission of the schools by providing specialized resources for promoting and supporting educational scholarship, by providing an academic home for researchers and educators interested in participating in the MERI *field*, and by providing evidence-based input and support to local educational innovations and mandates (Gruppen 2008). The findings presented in this study can usefully assist institutions that are interested

in developing a new, or in reorganizing an existing, MERI unit. The description of the MERI *field, capital* and director *habitus* presented here can be used to inform the practices at other units. We posit that a better understanding of these complex social structures can help units become savvy participants in the MERI *field.* With such knowledge, units can improve their security, their academic output and their status in the MERI context – locally, nationally, and internationally.

This study is not without limitations. Chief among these is the fact that data were collected from MERI unit directors in Canada and not in other nations. This could limit the transferability of findings to units outside Canadian borders. However, the elements of success and the elements of *habitus* employed to achieve this success were described by all study participants. We posit that these commonly-shared descriptions would likely be echoed by and applicable to units in other nations. Such transferability must, of course, be confirmed by additional research efforts. Additionally, we limited our participant pool to include only unit directors, and not the health professions- and PhD-trained faculty who work within these units. The value of triangulating the definition of and the identification of structural supports enabling success for MERI units with the perspectives of these other populations is not lost on our team. In fact, we have launched a second study to solicit the perspectives of these faculty members in hopes of identifying congruent and divergent opinions among these different populations. We are eager to understand if the *field*, *capital*, and *habitus* elements we observed with unit directors will hold true for the faculty working within these same units.

Interestingly, there is one additional theme that the directors repeatedly described: a sense of the "unique" status of their unit. The paradox inherent in this statement is clear: the participants commonly described being unique. We propose that this is not an indication that our study findings are not transferable, but is instead a reflection of the advocacy and managing expectations work that directors engage in to have their MERI units accepted in their local contexts. Be it being unlike any other unit in their local context ["To the research centres, we don't look quite like a research centre. To the service units, we don't look like a service unit" (D1)]; be it having a local reputation unlike any other unit at the school ["One thing is clear and I think makes us unique is that we are seen as (1) a repository for knowledge and education, and (2) as a change agent" (D2)]; or be it having a mandate that is somewhat different from other Canadian MERI units ["we may stand out a little bit as being a little bit different than some of the other [MERI] units" (D5)]: each director explained that their unit was a "special snowflake." And indeed they are. Canadian MERI units are organizationally defined as centres, departments, programs, units, divisions and offices. They have as many as 12 PhDs in the unit, or as few as one. They are headed by directors who have a PhD, or an MD, or both. No two configurations are quite the same. And yet, they work in the same *field,* share similar definitions of legitimate *capital,* and have commonalities across their respective *habitus.* These units may be "special snowflakes" in their local contexts but, within the larger MERI *field*, they are social agents who are working towards the achievement of commonly-shared interpretations of success.

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Appendix

Interview Structure with Sample Questions

Question Set #1: Questions about the vision and mission of your unit.

Sample question:

Who do you consider to be your major stakeholders?

Prompt:

a. Is your focus on UGME, PGME or CME/CPD?

   i. If UGME, is it pre-clerkship or clerkship?

b. Do you concentrate on MDs and medical trainees OR do you focus on inter-professional disciplines, e.g. nursing and allied health?

c. Is your focus on supporting:

   i. Clinician educators or

   ii. Basic scientists or

   iii. The PhDs in your unit?

Question Set #2: Questions about accountability and metrics of performance.

Sample question:

How do you define success for your unit?

Prompt: Give whole list if giving an example is necessary:

Publications, grant funding, national and international reputation, staff retention, successful accreditation of UME or GME programs, etc.

Question Set #3: Questions about the culture of your institution.

Sample question:

Are there rewards for medical education in the Promotions and Tenure process?

Prompt: Are clinical faculty promoted on the basis of research alone? Educational scholarship alone?

Question Set #4: Questions about the structure of your unit.

Sample question:

Are your PhDs appointed primarily to a basic science department? Or a clinical department? Or hold other appointments?

Question Set #5: Facilitators/impediments to success

Sample question

Given the questions above, concerning the structure and culture of your unit within your institution, please describe what you think facilitates the success of your unit.

References

Albert, M. (2004). Understanding the debate on medical education research: A sociological perspective. *Academic Medicine, 79*, 948–954.

Albert, M., Hodges, B., & Regehr, G. (2007). Research in medical education: Balancing service and science. *Advances in Health Sciences Education, 12*, 103–115.

Arnold, L. (2004). Preface: Case studies of medical education research groups. *Academic Medicine, 79*, 966–968.

Bourdieu, P. (1977). *Outline of a theory of practice*. Translated by R. Nice. Cambridge: Cambridge University Press.

Bourdieu, P. (1986). The production of belief: Contribution to an economy of symbolic goods. In R. Collins, J. Curran, N. Garnham, P. Scannell, P. Schlesinger, & C. Sparks (Eds.), *Media, culture and society: A critical reader* (pp. 131–163). London: Sage.

Bourdieu, P. (1991 [1982]). *Language and symbolic power*. Translated by G. Raymond & M. Adamson. Cambridge, MA: Harvard University Press.

Boyer, E. L. (1997). *Scholarship reconsidered: Priorities of the professoriate*. San Francisco: Jossey-Bass.

Elam, C. L. (2004). Medical education research at the University of Kentucky College of Medicine. *Academic Medicine, 79*, 985–989.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine Publishing Company.

Gruppen, L. (2008). Creating and sustaining centres for medical education research and development. *Medical Education, 42*, 121–123.

Hofmeyer, A., Newton, M. & Scott, C. (2007). Valuing the scholarship of integration and the scholarship of application in the academy for health sciences scholars: Recommended methods. *Health Research Policy and Systems, 5*.

Huggett, K. N., Greenberg, R. B., Rao, D., Richards, B., Chauvin, S. W., Fulton, T. B., et al. (2012). The design and utility of institutional teaching awards: A literature review. *Medical Teacher, 34*, 907–919.

Irby, D. M., Hodgson, C. S., & Muller, J. H. (2004). Promoting research in medical education at the University of California, San Francisco, School of Medicine. *Academic Medicine, 79*, 981–984.

Klingensmith, M. E., & Anderson, K. D. (2006). Educational scholarship as a route to academic promotion: A depiction of surgical education scholars. *The American Journal of Surgery, 191*, 533–537.

Kuper, A., Albert, M., & Hodges, B. D. (2010). The origins of the field of medical education research. *Academic Medicine, 85*, 1347–1353.

Louis, K. R. (2000). Evolving the faculty reward system. *Academic Medicine, 75*, 868–869.

Nierenberg, D. W., & Carney, P. A. (2004). Nurturing educational research at Dartmouth Medical School: The synergy among innovative ideas, support faculty, and administrative structures. *Academic Medicine, 79*, 969–974.

QSR International. (2012). Retrieved February 25, 2013, from: http://www.qsrinternational.com/products_nvivo.aspx.

Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing & Health, 23*, 334–340.

Schwandt, T. A. (2007). *The SAGE dictionary of qualitative inquiry* (3rd ed.). Thousand Oaks, CA: Sage.

SDRME. (2013). Retrieved February 13, 2013, from http://www.sdrme.org/members-regular.asp.

Silverman, D. (2001). *Interpreting qualitative data: Methods for analyzing talk, text and interaction* (2nd ed.). Thousand Oaks, CA: Sage.

Simpson, D., Fincher, R. M., Hafler, J. P., Irby, D. M., Richards, B. F., Rosenfeld, G. C., et al. (2007). Advancing educators and education by defining the components and evidence associated with educational scholarship. *Medical Education, 41*, 1002–1009.

Stake, R. E. (2000). Case studies. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 435–454). Thousand Oaks, CA: Sage.

Steinert, Y., Naismith, L., & Mann, K. (2012). Faculty development initiatives designed to promote leadership in medical education. A BEME systematic review: BEME Guide No. 19. *Medical Teacher, 34*, 483–503.

Thomas, P. A., Wright, S. M., & Kern, D. E. (2004). Educational research at Johns Hopkins University School of Medicine: A grassroots development. *Academic Medicine, 79*, 975–980.

Van Melle, E., Curran, V., Goldszmidt, M., Lieff, S. & St-Onge, C. (2012). *Toward a common understanding: Advancing education scholarship for clinical faculty in Canadian medical schools.* (A position paper). Ottawa, ON: Canadian Association for Medical Education.

Varpio, L., & St-Onge, C. (2011, May). *Documenting rigor with the Study CV: A tool for research and scholarly work in medical education.* In *Workshop presented at the Canadian conference on medical education,* Toronto.

Viggiano, T. R., Shub, C., & Giere, R. W. (2000). The Mayo Clinic's clinician-educator award: A program to encourage educational innovation and scholarship. *Academic Medicine, 75*, 940–943.