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Voices at the gate: Faculty members' and students' differing perspectives on the purposes of the PhD comprehensive examination

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ABSTRACT
The comprehensive examination is a customary, yet relatively unexamined, requirement in North American doctoral education. This case study explored the purpose of a comprehensive examination as perceived by faculty members and students in a Faculty of Education program, at a Western Canadian University. We found that, in addition to the traditional gatekeeping function of the examination, other purposes emerged. Contrasting views about whether the examination was designed to assess content mastery necessary for teaching or designed to assess readiness for doctoral research were found. The use of the comprehensive examination as an opportunity to learn and as a means for identity formation, including introducing students to the pressures of academic life, also contrasted with its traditional assessment function. The purposes of the comprehensive examination remained ambiguous to students, even though they had been privy to discussions concerning the design and development of the examination. Moreover, faculty members did not always agree on the purposes of the comprehensive examination. The differences in perspective and how these affect the administration of the comprehensive examination have an impact on students' experience, including examination preparation. Implications for the implementation, preparation, and assessment of the examination are discussed.

KEYWORDS
doctoral education; faculty perspectives; student perspectives; comprehensive examination

Introduction

The comprehensive examination, also known as the qualifying or preliminary examination (Furstenberg and Nichols-Casebolt 2001), has been a common requirement in North American doctoral education since its inception (Estrem and Lucas 2003; Thyer 2003). Its roots can be traced to 13th century Europe with students publicly demonstrating their understanding by debating with their professors orally. Presently, in North America, the comprehensive examination takes place upon completion of coursework. Those who pass the examination transition from being *students* to *candidates*. It is frequently a prerequisite for the doctoral dissertation or thesis (Fansler, Roberts and Hecht 1995; Thyer, 2003).

Despite being a common feature of doctoral education, the comprehensive examination is often perceived as being ambiguous and ill-defined by students (Golde and Dore 2001; Estrem and Lucas 2003). With this in mind, our study was designed to contribute insights into

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understanding the purposes of the comprehensive examination. Specifically, we conducted a case study on its implementation in a relatively new doctoral programme within the Faculty of Education at a Western Canadian university to explore the perspectives of faculty, students, and candidates in relation to the examination's purpose.

The Comprehensive Examination: Its Purposes

Stakes are high as the comprehensive examination is frequently a requirement to perform dissertation work, and students who fail to pass it, within a given number of attempts, are required to withdraw from their doctoral programmes. Understandably, anxiety is also a common experience for those writing their comprehensive examinations (Anderson et al. 1984; Furstenberg and Nichols-Casebolt 2001; DiPietro et al. 2010). Criticisms relating to the stress induced by the examination as well as with its effectiveness as an assessment have motivated attempts to reform or abolish it since at least the 1960s (Khanna and Khanna 1972; Kostohryz 2011).

Proposed reforms have aimed to align the examination with learning outcomes associated with introducing students to academic practice, particularly their work on their own dissertation research (Furstenberg and Nichols-Casebolt 2001). Reformers, during the 1960s and 1970s, also sought to provide students with greater input into the evaluation process (Khanna and Khanna 1972) – a trend that continues to this day. More recently, scholars have advocated that the examinations play a role in advancing, rather than solely evaluating, student learning (Furstenberg and Nichols-Casebolt 2001). These newer perspectives on the purposes served by the comprehensive examination are reflected in alternative examination formats, such as portfolios (Thyer 2003) or the writing of publication-quality papers (Furstenberg and Nichols-Casebolt 2001; Kostohryz, 2011).

The comprehensive examination continues to endure, despite calls for its elimination as an assessment of doctoral readiness. Today, wide variation exists in how the comprehensive examination is implemented (Furstenberg and Nichols-Casebolt 2001; DiPietro et al. 2010; Kostohryz 2011). However, its general format has remained consistent in that it still includes a written component (in-class or take-home) and possibly an oral component (Furstenberg and Nichols-Casebolt 2001; Estrem and Lucas 2003; Kostohryz 2011).

Gatekeeping and Learning

While the precise purposes and related outcomes associated with the doctoral comprehensive examination are undergoing some redefinition, at every institution where the tradition is observed, its principal use is to determine which students are qualified to continue pursuing entrance into the academic community (Golde and Dore 2001). Recognising the enormous amount of time necessary to supervise doctoral students to the successful completion of their thesis or dissertation work, faculty may rely on the comprehensive examination as a means to address *mistakes* made in admitting students who struggle to meet expected standards (Khanna and Khanna 1972). However, the criteria used for the gatekeeping function may vary according to assumptions about desired learning outcomes for doctoral students.

Consequently, the learning that the examination is designed to assess varies. Breadth of understanding (Khanna and Khanna 1972), mastery of the canon of the field, and skills required for academic life (Furstenberg and Nichols-Casebolt 2001) have been mentioned in the literature. These purposes play a role in determining the format selected for the examination. Considering that gatekeeping remains a central function of the examination and that a variety of faculty perspectives on the examination's purposes and designs exists, research is needed to understand how comprehensive examinations relate to programme goals and student learning.

Situating within the Wider Context

While the precise structure of doctoral degrees differs internationally, their purposes; procedures; and outcomes, more broadly, have come under increased interest and scrutiny. This is in large part driven by the increasing view of doctorates as an essential component of a nation's innovativeness and economic competitiveness. To this end, there has been increasing focus on the process and outcomes of the doctorate, including research skills, but also increasingly on what some view as generic 'employability skills' as well as on degree attrition and completion time. In many cases, this has led to accountability frameworks and benchmarking activities (Gilbert et al., 2004; Craswell, 2007; Andres et al., 2015). Within the Canadian context, while this discourse and overall orientation are present, the decentralised nature of the Canadian educational system has meant that universities have remained relatively heterogeneous and autonomous in this regard and no national formal accountability or benchmarking frameworks exists (Shanahan & Jones, 2007; Association of Universities & Colleges of Canada, 2008; Andres et al., 2015).

Aims of this Study

The research literature on the comprehensive examination is not as well developed as one might expect, given its importance as a milestone in North American doctoral education. Although some literature does exist in relation to the comprehensive examination's historical development and purposes, its form is generally based upon unexamined tradition (Golde and Dore 2001; Estrem and Lucas 2003; Kostohryz 2011).

This study gives voice to students and faculty (McAlpine and Norton 2006) who were involved in the implementation of what was a relatively new comprehensive examination at the time that this study was conducted, and it contributes to a greater understanding of the examination's role in doctoral learning and assessment in this programme (Chen 2013). It is part of larger research in which we conceived of the comprehensive examination as a process that encompasses faculty and student preparation, students' writing and oral defence experiences, and professors' evaluation of the examination. By exploring all three phases of the examination, we aimed to gain insights on the experiences of faculty and students and to explore how these perspectives influenced the design and implementation of this particular comprehensive examination. Through naturalistic generalisation (Stake, 1995), this case study provides students and faculty with the opportunity to reflect upon their own comprehensive examinations (Furstenberg and Nichols-Casebolt 2001), and it provides insights on how to assist students in preparing for this high-stakes event in their academic lives.

Method

Case Study Approach and Procedures

At the time of data collection, a total of eight students had written the examination since the programme's inception, and both faculty and students had recently been involved in discussions about its direction. This situation afforded a triangulation of perspectives on the examination by faculty, responsible for the assessment design, and by students and candidates who were privy to discussions on the development of the examination. Moreover, faculty and students in such a situation could arguably be said to be in a favourable position to articulate their understanding of the rationale and purposes of their particular programme's comprehensive examination more easily than perhaps those who belong to a programme with a more entrenched design, thereby increasing the potential for meaningful insights to emerge.

Participants and Data Collection

To obtain multiple perspectives, we interviewed five students who had achieved doctoral candidacy (C1; C2; C3; C4; C5), five students who had yet to complete the examination (S1; S2; S3; S4; S5), and six faculty members (F1; F2; F3; F4; F5; F6) who were involved in designing and administering it. The six faculty members comprised the entirety of the faculty associated with this degree programme. All data were collected from 2012 to 2013.

Faculty. Three faculty members were principal contributors to the design and ongoing development of the comprehensive process, while three others were involved to a lesser degree. All faculty members had either supervised or served on committees for students who had completed the process. Semi-structured interviews were used, and questions were asked of faculty regarding the purposes of the comprehensive examination; interviewee's perceptions about the kinds of knowledge and skills to be assessed; and faculty members' approach to evaluating students' performance on the examination. Interviews with faculty members lasted for 20 to 60 minutes.

Students. We elicited student and candidate views on the purposes of the examination, on how they had prepared or planned to prepare for it, and on what they understood about how student performance on the examination was evaluated. The five pre-comprehensive students comprised a diverse group with respect to student status (two full-time; three part-time). Here, part-time status refers to students who were engaged in full-time employment off campus, whereas full-time students were employed on a part-time basis, usually on campus as research assistants, teaching assistants, or lecturers. Interviewees were also diverse in terms of their stage in the programme. Two were new students, two were beginning to prepare for the comprehensive examination, and one was scheduled to write it but had not yet done so. The interviewed doctoral candidates differed in terms of full-time or part-time status and also in the number of attempts taken to pass the examination, with some having been required to rewrite all or part of it. Students and candidates were interviewed for 20 to 50 minutes.

Data Analysis

Data analysis involved the iterative examination of interviews and other available documentation, including official programme documents and previous examination questions and answers. All interviews were audio-recorded and transcribed verbatim. We pursued an iterative process of individual open coding (Corbin and Strauss 2008) and data collection. Based upon the categories that we derived from independent individual coding of the interviews, we examined the data in a collaborative process that involved the comparison and consolidation of coding categories into themes. Student, candidate, and faculty perspectives on each of the emergent themes were compared within and across participant categories. In addition, direct interpretation of specific experiences and perspectives was also used to gain insights, especially when a contrast in participant perspectives on a specific instance was observed. The authors of this study contributed faculty and student perspectives in the analysis, as two of the authors were PhD candidates while the study was being conducted and the third is a faculty member in the programme studied. Triangulation of perspectives continued as the researchers shared the findings with participants for feedback and comments.

Case Background

This study began when the first and second authors, having recently completed their comprehensive examinations, were joined by a faculty member to gain perspective on the programme's comprehensive examination process.

The format of this particular comprehensive examination consists of a three-week, three-question, take-home written examination that is followed by an oral defence. The written and oral

portions of the examination are graded together as either a pass or a fail by a committee of three faculty members; satisfactory answers on the written portion are a prerequisite for the oral examination. Students are allowed a second attempt at passing the comprehensive examination if they fail on the first attempt. A second failure would require withdrawal from the doctoral programme, though this has yet to occur.

Setting

This programme had been offered for less than ten years when this study was conducted. Informal quarterly gatherings of programme faculty and students provided occasions for open discussion about the comprehensive examination, its format, and preparation for it. These gatherings were an important source of information on the examination for the first candidates who had written it. At the time when this study was being conducted, however, some changes had been made relatively recently in terms of comprehensive examination resources. Specifically, the programme had launched and made available to all students a website that was designed to assist them in preparing for the examination. Of the interviewed candidates, two (C3 and C4) had the opportunity to use it. The website consisted of examination guidelines and a repository where students could voluntarily share their comprehensive examination questions and answers with other students.

Results

Findings Relating to Purpose

Themes relating to the purposes of the comprehensive examination and the number of students, candidates, and faculty who mentioned them are found in Table 1. For these themes, varying and sometimes conflicting perspectives were observed across and within faculty, candidate, and student groups.

Gatekeeping

One faculty member, F5, described the comprehensive examination in this way:

Table 1. Themes relating to purpose.

Themes	Sub-theme	Number of occurrences
Purposes		
Gatekeeping (acknowledged default)		Faculty = 4 Students = 2 Candidates = 3
Assessing mastery of coursework content		Faculty = 6 Students = 2 Candidates = 5
Preparation for teaching in the field (perspective of faculty)		Faculty= 3 Candidates = 1
Preparation for work on the thesis (perspective of student)		Faculty = 5 Students = 4 Candidates = 4
Learning opportunity for understanding content		Faculty= 1 Students= 2 Candidates= 5
Forming students' identities as members of a particular scholarly community		Faculty= 5 Candidates = 2
	Introduction to academic life	Faculty = 1 Candidates = 2

This table indicates the themes and sub-theme identified in terms of purpose and how many faculty, students, and candidates discussed this theme in their respective interviews.

> Sometimes for whatever reasons, there's… someone who maybe… shouldn't progress to the dissertation stage; and that's really the only kind of cut-off point… I think that it's important; otherwise, there's no meaning to getting the degree beyond getting in[to the programme].

Another professor, F1, described the gatekeeping function as a form of 'quality control' and explicitly contrasted it with the one-chance examination that he had experienced in his own PhD programme:

> It's not entirely wrong to call [the comprehensive examination] a process of quality control… though in a different sense than it was [where I earned my PhD] because they were looking explicitly to kick people out. Whereas, here, we have a relatively forgiving process….You get lots of feedback before you get your second chance. And the quality we're controlling for is the quality of what you learn, not the quality of the people who get a degree.

Students did not necessarily view this examination in such positive terms. Candidate C1, who had been required to rewrite the examination, likened it and its gatekeeping function to one of 'indoctrination into a hierarchy'. C1 stated, 'It's a thing where people stand in judgement of you and it's meant to… reinforce your place and [faculty's] place'.

Assessing Mastery of Coursework Content

The programme website, which serves as the primary source of written information for students and faculty on the comprehensive examination, describes the examination as a means by which 'to evaluate the student's ability to synthesise learning across coursework taken'. This perspective on the purpose of the examination was reflected in several faculty responses. For example, F2 stated, 'I think that the comps should be about a broad knowledge of the field as opposed to about a person's thesis because I think, you know, you're getting a degree in the field, not in the thesis study'.

Elaborating on this view, more than one faculty member contrasted the comprehensive process used in this programme to the thesis-driven, 'normal' way of conducting such examinations in their academic unit. For instance, faculty member F4 stated,

> The default is just to let the comprehensive examination process go towards being completely about the student's thesis research. And one of the things, when we designed this programme, we were doing was… bringing it back a little bit more to what it's supposed to be, which is more comprehensive.

In general, students and candidates understood the examination's purpose as a test of their mastery of course content. However, in contrast to faculty, students and candidates tended to connect this goal with their planned thesis work. For instance, S4 states, 'From the perspective of professors, to be sure that you have the right level to continue… and the right understanding to continue with the programme, to do your research'.

It should be mentioned that not all faculty agreed with the purpose of testing students' mastery of programme content. One faculty member, F6, felt this was unnecessary 'because frankly, they've passed all those courses already'.

Preparation for Teaching

When asked to explain why it was necessary to test students' mastery of course materials, one faculty member, F1, linked the 'comprehensiveness' of the examination not to the thesis work but to students' preparation for future teaching in the field and for job interviews:

> The way that we do assessment in individual courses in graduate school… it's pretty safe… to just figure out what your favorite topic within the course is and… really de-prioritise everything else… What that results in later on is… the sort of embarrassing experiences that I've seen interviewees have when they look for a job. They know their own research really, really well, but they don't understand what its connection is with the rest of what goes on in the field.

This perspective rests upon the assumption that the mission of the programme is primarily one of preparing future faculty members, even though a significant number of its students and candidates will likely not pursue faculty positions in this field. As F4 explains,

> I don't think our program is a professional program. It has professional elements and more of our students might go into professional jobs than in say uh the science program or a philosophy program, but I think we have tinges of professionalism.

In contrast, students and candidates did not tend to see the relationship between the comprehensive examination and one's readiness to teach. Only one candidate remarked upon the relationship between the comprehensive examination and preparation for teaching. Specifically, C5 stated, 'We should have the tools in place that will enable us to… teach others about [the field]'.

Preparation for Work on an Original, Research-Based Thesis

Instead of seeing preparation for future teaching as one of the purposes of the examination, most students and candidates mentioned readiness for doctoral thesis research as the key learning outcome being assessed by the comprehensive examination, despite this being neither a stated intent in *official* documentation nor being mentioned by most of the faculty as a learning outcome to be assessed by the comprehensive examination. Instead, only two faculty members mentioned that assessing preparation for thesis research was integrated into the assessment. Further, they clarified that it was assessed only insofar as students could contextualise their research within the field. The other three professors only mentioned preparation for thesis work in relation to other programmes in their faculty and as a counterpoint to what they preferred to assess, which was breadth in content understanding and, consequently, preparation for teaching the field's canon. A typical response was provided by F2, who stated:

> All the other programs I know about… they develop three questions with the student and they're all about the thesis. So, there's – that's what they're about. So, there's one methodology course - one methodology question about the thesis; there's one lit review type question. So the idea is that they're sort of drafts of the chapters. So, it's very thesis-based. So, we went a very different direction because… you're getting a degree in the field, but also because we were thinking that people who were preparing to be academics and the fact that if they were going to be getting a job… they would be asked to teach a variety of courses and if their… knowledge is only about the very narrow area of their thesis, then they don't have much to, you know, rely on in terms of thinking about that.

In practice, however, professors occasionally validated the students' belief that the purpose of the comprehensive examination is to assess preparation for thesis research by the nature of the questions that they set for a student's examination. We discuss the experience of one candidate, C4, in depth because it reveals how such a decision can unwittingly impact student experience. Specifically, C4 expressed confusion about the kind of knowledge being evaluated by the examination because two of his three questions were specifically related to his research proposal. C4 states,

> I'm not so sure what the purpose was. The questions I got were super specific [to my thesis]… There was one that was kind of general, talking about overall issues with [the field], but the other two were clearly drawn specifically from the content of my [research] proposal, not my coursework.

C4's examination included questions at odds with the stated goal of assessing mastery of the canonical material covered in coursework, which is what he had expected after reading the comprehensive examination resources on the website and after reviewing previous examinations that had been uploaded. Consequently, it is not surprising that candidate C4 viewed having access to previous examinations as counterproductive. C4 explains,

> I went on [the website] and read all of the other comps… That actually was probably what threw me off. The questions were so predictable up to that point, and so heavily based on the coursework… But, in the end, seeing other people's questions really didn't help.

Further, C4 did not foresee that his preparation, consisting of reviewing and making notes on all course material, would be inadequate preparation for the examination. C4 expressed frustration, with a laugh, and stated, 'I learned life is unfair'. He proceeded to expand upon the experience as follows:

> I think the faculty said you shouldn't have to do any or much additional reading… but that's just not possible. I mean how can you seriously do that? You get a question, a very specific question, and all you have are super general articles… You can't answer those kinds of specific questions… maybe this is due to the evolution of the comps.

This situation reveals that faculty did not always adhere to the stated intention of assessing mastery of coursework content. Instead, they were sometimes found to develop questions with the intent of 'pushing' a particular student's thinking on issues that were perceived to be problematic in their proposed thesis research. In line with this purpose, one faculty member (F3) explained that the comprehensive examination provided 'an opportunity to create a remedial activity for the student by introducing them to some content they may not have or tuning for some features [opportunities for refining one's learning] of that content'. In response to such situations, however, faculty member F5 stated,

> There have been a couple of cases recently where [a doctoral student] has proposed something [for thesis research] that [the student] may not have a tonne of background in. So we've asked them to read a select number of pieces… like, I think 2-4 [articles] max, as part of it, but I think that's something that I raised recently in my mind as a question: is that appropriate or not?

Learning Opportunity for Understanding Content

While faculty seemed to operate on the assumption that they were examining how students had understood and synthesised programme materials over the course of their prior coursework and examination preparation, students more often saw this understanding developing and synthesis happening *during the examination, itself*. Rather than use their preparation time to begin synthesising their understanding, the majority of students and candidates indicated that preparing for the comprehensive examination would consist solely of developing indexing systems so that they could easily search, locate, and retrieve relevant material when writing their examinations.

In addition to the assessment component, candidates and some students viewed the writing of the comprehensive examination as an opportunity to gain perspective on the course material or to better organise what they had learned. For example, S5 stated, '[I think the purpose is] to have students to organise their thoughts after reading so many related materials in the field'. In another instance, C2 explicitly stated that one of the purposes of the comprehensive examination was to provide 'a way to synthesise across all the coursework'.

Moreover, one candidate stated that he could only summon the motivation to complete his examination by viewing it as a learning process rather than as an evaluative one. Candidate C1 stated,

> I don't know if this was intentional but the exam process was not just an assessment process, it was a learning process. There was a lot of things gotten, from in my part anyway, that got learned in this process. They were accommodating of the fact that I was using it as a learning process.

Forming Students' Identities as Members of a Particular Scholarly Community

Candidates and faculty tended to view the examination as playing a formative role as well as an evaluative one. One faculty member, F4, expressed the view that the comprehensive examination should play a role in students' identity formation as researchers within the academic community:

> [The comprehensive examination is] one of the pieces that goes towards establishing the identity of the researcher within a discipline. So, when you come out of your programme, it's not just, 'Oh, I did this thesis where I studied the intersubjectivity of teachers as they were preparing their lessons' or something like that. It's, 'I am an educational psychologist.' It's a sense of identity that … motivates you because you feel that [you] have something in common with these figures in our discipline that are well known.

The oral defence component of the examination was also viewed by three faculty members as playing a role in the students' development as scholars. For instance, faculty member F2 stated, 'I think the oral is very uh … is a pretty developmental process … . I see the oral as another step toward becoming a scholar that, you know, you're interacting with other scholars'.

Occasionally, a candidate, C5, expressed a similar view:

> I think that ultimately what we are being assessed on is our ability to understand and see the field as an insider … we should have the tools in place that will enable us to research within this field, forward it, and teach others about it.

Introduction to academic life. In their interviews, professors expressed concern about the stress produced by the comprehensive examination. Most felt that they had made an effort to minimise it, although F3 justified the stresses as authentic to academic life and that the introduction of these pressures into the examination situation had utility in evaluating the programme as well as in foreshadowing the kind of lifestyle a student should expect in academia. F3 stated,

> So because the academic life past PhD has pressures, it's in a sense environmentally valid to have a little bit of that in the PhD comps. But if it becomes unmanageable for the student … that's a sign again that … maybe we haven't prepared the student to the degree where they should be able to take it on without a great degree of problems … Or it's an issue that the student might want to think about in the context of [the question] 'is this the kind of life I'm going to be putting myself into?'

Indeed, candidate C5, who had seriously been considering an academic career prior to the examination, came to the realisation that 'following an academic path could lead to some serious ramifications [for] my future lifestyle'.

Arguably, introducing elements of academic life into the design of the examination is defensible only if the students in a programme will eventually become professors. On the other hand, one faculty member believed that the oral defence component of the examination could play a role in introducing students to communication skills that they could use in academia as well as beyond it. Faculty member F4 stated,

> One of the things people … have to learn in graduate school is communication. And oral communication is a key part of that … Now, I'm not sure that the oral examination is the best therapy for public-speaking phobia, but at least it kind of brings that issue up and fronts it so that people know that they're going to have an oral exam and eventually they're going to have a [thesis] defence … Then, they will have an opportunity to take steps to remedy; they'll practice and so on.

Given that a significant number of PhD students, in general, are unlikely to become tenure-track professors (Golde and Dore 2001; Fuhrmann, Halme, O'Sullivan and Lindstaedt 2011), it may be necessary to consider how the comprehensive examination can more authentically reflect the other contexts in which doctoral students will likely work. In the case of this particular PhD programme, the aspirations of some full-time students clearly did lie in academia, while part-time students more often had established careers in postsecondary teaching or teaching support and were unlikely to transition into research-oriented appointments. Regardless of students' eventual career paths, the dominant view among this programme's faculty was that a PhD programme should prepare students for tenure-track, research-oriented positions.

Discussion

The tradition of the comprehensive examination ostensibly pertains to students' initiation into a field of study or the academic community at large, and its format and goals can be said to be

reflective of a broader scholarly tradition and a particular programme's community. Although one might expect that this would facilitate the design and implementation of a clear and consistent assessment in the form of the comprehensive examination, our study reveals that conflicting beliefs and tensions about the examination's purposes exist.

Academic Versus Professional Goals

Since the institution under study offers profession-oriented Doctor of Education (EdD) programmes, some faculty believed that students pursuing their PhD aspire to a research-oriented understanding of the field. However, when a significant proportion of students are not likely to work in research-focussed settings, it may be important to reconsider the purposes of the comprehensive examination. As other researchers have noted, the inherent preference among faculty to prepare students for academic roles is common (Golde and Dore 2001; Fuhrmann et al. 2011; Thiry, Laursen and Loshbaugh, 2015). Faculty members often have limited contact with and knowledge of careers beyond the academic context (Golde and Dore, 2001; Sauermann and Roach 2012); yet, this does not absolve them of the responsibility to consider how their students' needs might differ from their own.

Espoused Versus Enacted Purposes of the Examination

In our study, all faculty were aware of and could explain the official goals of the examination, though they did not necessarily agree with them, apparently deciding to go along with aspects of the comprehensive because they found themselves in a minority stance. Others appeared to espouse the consensus view of the examination while in practice implementing a qualitatively different one. On occasion, faculty veered away from the stated purposes of the examination and instead posed 'remedial' questions to students, prompting (against policy) additional reading on the part of students to further their understanding of topics beyond the programme canon.

This tension between the multiple purposes of the doctorate is an acute one internationally (Andres et al. 2015). However, this issue may be especially acute in the Canadian context, where wide-scale standardisation at a national level does not exist. While this autonomy offers benefits in terms of self-determination by institutions of higher education, it has been noted in other contexts, such as in the United Kingdom (Humphrey, Marshall and Leonardo, 2012) and Australia (Kiley, 2011), that the introduction of large-scale formal frameworks appears to have been successful in reducing attrition and/or completion time. By contrast, in Canada, it remains common for degrees to take longer than the nominally stated time to completion (Canadian Association of Graduate Students, 2014), but this may be partly due to a lack of clarity of purpose for degree activities such as the comprehensive examination.

Framing these findings more generally, we would advise faculty in doctoral programmes to consider carefully, as colleagues, whether the nature of the questions they pose in the comprehensive examination are consistent with the purposes officially ascribed to it. To the extent that they are not, colleagues may wish to reformulate those purposes. Differences among colleagues may require reflection on why the original foci of the assessment were considered important, whether they still are, or whether there are alternative ways in which the aims might be addressed.

The Comprehensive Examination as a Learning Experience

Within the context of social work doctoral education, Furstenberg and Nichols-Casebolt (2001) suggested that the comprehensive examination could be used to help students in consolidating their understanding or to help them advance their thinking on a topic. They contrasted this

approach with that of testing students' mastery of knowledge. Our own findings from a doctoral programme in education resonates with theirs in terms of the insights gained by candidates as they read, synthesised, and prepared their arguments to answer examination questions. However, we also recommend that caution be taken in making sure that this learning experience relates to the expected and espoused purposes of the examination, thereby reducing unproductive stress around the assessment.

The Design of the Comprehensive Examination

Like all educational designs, the structure of the comprehensive is based upon assumptions about the kinds of knowledge and skills that are considered important by the faculty members who design the programme. Those students who acquire an understanding of what is valued by faculty pass more easily through the gate. Differences in judgements about what should be of value at this stage of doctoral education explain some of the structural variety among comprehensive examinations across programmes and institutions. Some programmes chiefly value the mastery of canonical knowledge and skilled argumentation, whereas others may privilege creative problem solving, quick thinking, or other goals. In the Carnegie Initiative on the Doctorate (CID) Graduate Faculty Survey, Walker, Golde, Jones, Conklin Bueschel, and Hutchings (2008) noted a lack of agreement among faculty on the purpose of the comprehensive examination even within the same department. Given this, it is not surprising that students may find the purpose of the examination unclear. Walker et al. (2008, 42) also found that:

> [students'] understanding of the exams often comes from informal sources, usually more veteran students. The formal channels – including faculty, administrators, handbooks, and Web sites – are often contradictory or outdated in their information. Changing requirements, even when they are for the better, may actually increase confusion.

The divergent views, experiences, and tensions that were found within our study, between students and faculty as well as among faculty members, provide insight into Walker et al.'s aforementioned findings and Golde and Dore's (2001) finding that 43.5% of doctoral students agreed with the statement that "exams and other hurdles seem arbitrary and unhelpful" (p. 40). Our findings provide support that the process of undertaking to write the doctoral comprehensive examination can be viewed as an arbitrary one instead of as a meaningful experience in which all participants understand its purposes in similar ways.

Limitations and Future Research

As a case study set in the context of a particular discipline, programme, and institution, the direct application of this study's findings to other programmes is limited. Programmes may define the purposes of the comprehensive examination quite differently. However, triangulation of perspectives among faculty, students, and candidates sensitised us to questions that could be asked and questions that could arise around the comprehensive examination in many contexts. In this way, this case study provides insights on general issues for faculty to consider regarding the design and administration of the comprehensive examination, thereby contributing to the literature in this under-researched area of study.

In our view, it may be inevitable that the doctoral comprehensive examination serves multiple purposes (e.g., gatekeeping, preparation for teaching, and academic identity formation). However, it is also a milestone that is steeped in tradition, and it can be executed in an uncritical way. Our findings should be viewed as an invitation to faculty to invest effort in questioning the implicit assumptions surrounding the PhD comprehensive examination.

Research on how the comprehensive examination can be transformed into a more meaningful educational experience is recommended. We also suggest that future studies explore how the

examination can be better implemented as an assessment milestone on the path to independent scholarship as well as on the road to other careers. Research into student experiences will be critical in informing these assessment decisions. Our study, thus, makes evident the need to explore the ways in which the processes in place for the comprehensive examination are designed to reflect assumptions about the goals of doctoral education – what these are and whose voices should be heard at the gate.

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