8-30-2018

Doctoral Student Career Preparation: An Institutional Response

Kimberly Miller
kmiller9@uwo.ca

Abstract

This Organizational Improvement Plan (OIP) examines the issue of institutional support for doctoral students in preparing for careers inside and outside the academy. While discussions about the purpose of the doctorate are not new, the conversation about preparing PhDs for diverse careers is an emergent one, occupying space inside and outside academic circles. At the heart of the conversation is a debate about the purpose of the doctorate and the institution's role in employability beyond the professoriate. The traditional academic culture at Institution A adheres closely to the notion that the PhD is solely preparation for an academic career. This position contradicts an increasing amount of internal and external evidence that supports a broadening of the definition of the doctorate's purpose, and by extension increasing internal and external support for the need to change how institutions prepare doctoral students for careers. Indeed, changes in the academic labour market, changing social and political expectations about the nature of doctoral students' contributions, and the changing career interests of students suggest that the time for change has come. A change implementation plan that introduces a transitional competency and career engagement program that will result in a focus on helping students prepare for both academic and non-academic careers is proposed. The approach to change and the change implementation draws on tenets of adaptive leadership, two separate frameworks for leading change, and a leadership approach rooted in situational and transformational leadership styles. The OIP articulates specific approaches that will help articulate the need for change, monitor the success and challenges of the change plan, and identify future considerations for subsequent change cycles.

Keywords: doctoral students, career preparation, career engagement, adaptive leadership, Kotter's Eight-Stage Model of Organizational Change, Duck's Five-Stage Change Curve

Acknowledgements

My dear friend, Rick, always says life begins at the edge of your comfort zone, and truer words had never been spoken when I decided to submit my application to pursue a doctorate. Fortunately, my doctoral journey was made more comfortable by the encouragement and support of many family, friends, and colleagues, and for that I am eternally grateful. Some people in my life, of course, warrant specific acknowledgement for the role they have played in helping me realize this accomplishment.

Let me begin with my Western cohort-Melanie, Erika, Colin, and especially Steph-who pulled me through the last three years. This experience was enriched by your camaraderie, motivation, and inspiration. I very much felt like we were in this together, and knowing that you were a text or message away provided a great deal of comfort during the challenging times. I also want to acknowledge the support from program faculty, and especially Dr. Scott Lowrey who provided insight and support down the home stretch.

Rich, my life partner (as he likes to refer to himself), with our shared debt and our shared cats, has always been a positive influence in my academic and professional pursuits. As an undergraduate, he spent many a night pulling me through the depths of despair (of my own making) as I stared down a deadline. This time his support came more in the form of sage advice as I balanced academics and my career, helping me develop mantras (i.e. perfect is good, done is better) to help manage my natural tendency towards perfectionism and procrastination. Above all, he has faith in me and my ability to accomplish things that I never dreamed possible, and for that I am most thankful.

There is a quote about knowing and being strong women that really resonates with me. My sense of myself as a strong woman and my belief in being able to realize this goal, has largely

been shaped by knowing strong women, and three in particular. First, as a child I spent a lot of time with my grandma, who I lost during this program. I often reflect on the lessons I learned from her and how they have guided me. Second, my mom, who didn't see a lot of me over the last three years, but nevertheless supported me towards achieving my goal. She may be happier than I to see the end of this degree! Finally, many years ago I had the good fortune of meeting Dr. Debra Dawson, who remains a mentor, guide, confidante, and friend. She has been a constant champion, paving the way to professional opportunities, and providing positive encouragement in my ability to undertake new challenges. Even in retirement, she remains a cheerleader and guide, and I am incredibly thankful that she took me under her wing all those years ago.

   As my doctoral journey comes to an end, it is clear to me how very blessed I am to be surrounded by people who love and support me, including those not explicitly mentioned here. Thank you to all.

DOCTORAL STUDENT CAREER PREPARATION

Table of Contents

Table of Figures

List of Tables

Executive Summary

Since its inception, Institution A has prided itself on its outstanding local, national, and global successes in teaching, learning, and research, largely influenced and guided by strategic plans dating back decades. At the core of the institution's current strategic plan is a vision to be a destination of choice for bright minds from around the world. While the institution's recruitment initiatives focus primarily on undergraduate programs, there is a growing emphasis on graduate student recruitment and retention. Indeed, the current strategic plan articulates a commitment to growing graduate student enrolment, while at the same time supporting students' personal and professional growth (Institution A, 2014a). The professional growth of doctoral students, particularly as it pertains to ensuring that they are adequately prepared for a variety of career pathways, is the problem of practice (PoP) that this organizational improvement plan (OIP) seeks to address. The OIP will explore the problem in a historical context, examine relevant factors in the change process, and articulate a new vision that will restore Institution A's leadership in the area of graduate student career preparation.

As recently as 2012, Institution A was identified as a leader in Ontario for its approach to graduate student professional development (Rose, 2012). At the time, the emphasis of professional development activities centred on knowledge and skills development related to careers in academia. As a scholar-practitioner in the area of career development, the author has observed the evolution of programs and services that address students' needs in non-academic professional development, while Institution A has lagged behind. Much of this national growth has been in response to an increasing spotlight, especially in popular media, on the state of the academic labour market and the diminishing prospects for careers in the professoriate.

As this issue has come into greater awareness, there has been a corresponding debate about institutions' responsibility in preparing students for diverse careers. Commentary on the issue ranges from calls to reform the doctorate to be more responsive to the labour market and better prepare graduates for careers inside and outside the academy, to insistence that the doctorate must stay true to its traditional roots. Regardless of where an institution sits on the continuum of the debate, it is clear that the problem needs addressing. At many institutions, there appears to be a growing interest amongst students, government, and some institutional leaders to marry discipline-specific curriculum with practical career preparation.

This OIP considers three possible solutions for addressing the problem of institutional support in preparing students for diverse careers, ultimately recommending the implementation of a new program that helps students explore career options and implement a planned course of action that opens doors to futures within and beyond academia. Implementing a change of this magnitude, which at its core threatens the raison d'etre for the PhD, is not without its challenges. To help ensure a successful transition from the current state to the future state, the change process is guided by frameworks (Duck, 2001; Kotter, 1996) that underscore the importance of the leader knowing what to change and why, and sets out a systematic and structured approach for change implementation. Analyses of internal and external factors drive the proposed change, as does a critical organizational analysis using Nadler and Tushman's (1980) congruence model. An adaptive leadership approach is posited as the type of follower-centric approach required to ensure that all stakeholders (e.g., administration, faculty, students) are mobilized towards attainment of the goal of preparing students for both academic and non-academic careers. A well-defined communication, monitoring, and evaluation strategy that enact a plan-do-study-act model of improvement help to mitigate challenges.

Once identified as a leader in graduate student professional development (Rose, 2012), Institution A has fallen behind its competitors in the development and delivery of coordinated supports for student career preparation. While Institution A provides doctoral students with programming, information, and supports that help them prepare for academic career paths, this PoP explores the need to prepare doctoral students who will-by choice or necessity-have careers outside of academia. Successful implementation of this OIP will result in the institution's restoration to a leader in the area and ensure that doctoral students will be adequately prepared for diverse career pathways.

Chapter One: Introduction and Problem

This OIP investigates the institution's role in preparing doctoral students[1] for diverse careers. The document consists of three chapters: an introduction to the PoP, an exploration of leadership theories and models that inform the planning and development of a change process, and a proposed change implementation plan. Chapter One considers how the issue of student career preparation is shaped by internal and external factors and the leadership position and lens of the author. The chapter also articulates a vision for change and explores the institution's readiness for change.

Problem of Practice

The PoP in this OIP is the need for Institution A to prepare students for careers outside of academia. Career development for students is an emerging concern for universities across Canada. This recent focus is a consequence of the realities of the academic labour market and the growing gap between supply and demand for full-time, tenure-track faculty positions. Given the current labour market conditions, increasing numbers of students will need to consider diverse career pathways. Students' preparation for careers inside and outside the academy is greater when their institution intentionally supports their career preparation.

Context for the Problem of Practice

To understand this PoP, it is useful to consider the history of doctoral education, the motivations for pursuing a doctoral degree for the majority of students, and the state of the academic labour market. The PhD dates to nineteenth century Germany and according to

---

[1] For the purposes of this OIP, doctoral students are those enrolled in theoretical/philosophical-based degrees that lead to a PhD, as opposed to practitioner-based degrees that lead to an EdD. Similarly, where the term doctoral program is used, it is in reference to PhD programs, not EdD programs, unless otherwise noted. Further, the use of the term student(s) denotes doctoral student(s), as opposed to undergraduate or Master's student(s).

Maldonado, Wiggers, and Arnold (2013) there have been very few changes since its inception. Largely viewed as preparation for an academic career, according to Kendall (2002) the model has often been described as an apprenticeship, and was initially designed to be a "…reproduction of the professoriate" (p. 133). This model continues to be effective in that it helps universities achieve their teaching and research goals (Altbach, 2003; Kendall, 2002). Despite this, doctoral education has garnered international attention and resulted in calls for evaluating the content, structure, and process to prepare scholars and researchers for present and future societal needs (Nerad, 2004; Nyquist, 2002). Growth in PhD 'production' in the United States began in the 1960s, levelled off in the 1980s, and then increased again beginning in the 1990s, in part because of misguided predictions that there would be a shortage of PhDs in the late 1980s (Nerad, 2004). Similar trends exist in Canadian doctoral education. Canada has experienced "…significant growth in the total number of people with PhDs…" (Edge & Munro, 2015, p. 9); this represents an increase of 68% between 2002 and 2011.

The Reality of the Academic Labour Market and Changing Career Interests

Research conducted by Edge and Munro (2015), Maldonado et al. (2013) and Sekuler, Crow, and Annan (2013), suggests that Canadian students generally undertake doctoral studies in pursuit of an academic career. Unfortunately, evidence suggests that very few doctoral graduates will secure employment as tenure-track faculty members (Edge & Munro, 2015; Maldonado, Wiggers, & Arnold, 2013). The Higher Education Quality Council of Ontario (HEQCO) reported that 65% of Ontario PhDs enrolled in doctoral studies with the intention of becoming a university professor; the percentage increased to 85% amongst humanities students (Maldonado et al., 2013). The report noted that while the available number of assistant professorships in Ontario had increased since 2005, the supply of PhDs also increased, outstripping the increase in

demand for new full-time faculty. According to a Conference Board of Canada report, approximately 19% of employed PhDs work as full-time professors (Edge & Munro, 2015). See Appendix A for a breakdown of the sectors in which Canadian PhDs work.

While the majority of students still pursue a PhD with the professoriate as their intended career, there is a growing number of students who enter doctoral studies with alternative career paths in mind (Desjardins, 2012; Porter & Phelps, 2014). In one study, international students reported that they intended to use their PhD to make positive social contributions in areas like environmental sustainability and animal welfare (Porter & Phelps, 2014). Results from the 2005 National Graduate Survey highlighted several reasons why doctoral graduates were interested in non-faculty careers (Desjardins, 2012). Of the respondents interested in non-faculty careers, the opportunity to make more money outside academia, better job prospects, a preference in practical work, or disinterest in teaching were all cited as motivators (Desjardins, 2012). Because of the changing academic labour market and the changing career interests of students, the role of universities in preparing students for diverse career paths has come under scrutiny. This OIP proposes one potential response.

Questions Emerging from the Problem of Practice

Interrogating the problem of practice raises several questions about who owns the problem of student career preparation and the moral obligation of universities to be transparent about doctoral degree career outcomes. Several examples from the research literature follow.

In the debate about the state of the doctorate, one of the questions that arises surrounds the career purpose of the PhD. Traditionalists suggest that the doctorate is solely preparation for an academic career (Kendall, 2002). Others point to the changing academic labour market and slowly shifting career interests of doctoral candidates in arguing for a broader definition of the

career purpose of the doctorate (Edge & Munro, 2015). At the core of this debate is a question about who owns the problem of preparing students for entry into their chosen careers. One could argue that the onus is on students to understand the realities of the academic labour market and take responsibility for their own career preparation. Most Canadian universities have career centres with staff available to assist with career exploration and decision-making and to help prepare for entry into the non-academic marketplace. These services are typically available to students, and if they have career-related questions, they can avail themselves of these services on their own.

Conversely, do institutions have a moral obligation to help their PhDs become aware of the reality of the labour market, help open the minds of those students to possibilities beyond academia, and offer career development programming that helps prepare them for non-academic career success? Despite anecdotal information, statistics, and the proliferation of news items over the last several years that paint the PhD as a degree in crisis (Chiose, 2013; Fullick, 2013a; Iqbal, 2015), doctoral candidates overwhelmingly continue to identify the pursuit of an academic career as the key driver behind their studies (Edge & Munro, 2015; Sekuler et al., 2013). Armed with this information, is there an ethical imperative for the university to implement a strategy that not only broadens the understanding of the career outcomes of its PhD students, but also actively prepares them for a range of career possibilities?

A second question that arises from an examination of the problem concerns university enrolment practices and the need to reconsider the expansion of doctoral programs. Some authors (Chiose, 2013; Fullick, 2013a; Iqbal, 2015) suggest that there are too many doctoral degree holders for the number of available academic positions. If their claims are valid, and if universities continue to maintain that the PhD is solely preparation for academic careers, why do

they continue to set enrolment targets that ultimately produce more PhD holders? The counter argument to limiting doctoral degree enrolment is the notion of *caveat emptor* or "let the buyer beware". This tension between enrolment and available academic careers raises questions about the level of the institution's transparency of career outcomes. Is it the university's responsibility to provide transparent information about labour market statistics such that students understand that while a certain number aspire to academic careers a much smaller number actually attain that particular career outcome? Alternatively, is it the responsibility of applicants to do their research before deciding to pursue a doctorate?

The problem of practice under consideration is multi-faceted and inevitably raises more questions than answers. Two questions that have emerged already centre on the issue of responsibility. Who is responsible for educating students about the career outcomes of the PhD, and who is responsible for preparing them for entry into the non-academic labour market?

Organizational Context

Organizational History

Founded more than 100 years ago, Institution A is a large university located in a mid-sized city in Ontario. The institution boasts more than 10 faculties, serving approximately 30,000 undergraduate and graduate students from around the world (Institution A, 2017a). While undergraduate students constitute the majority of Ontario's post-secondary enrolment, graduate students are an important part of the higher education canvas. At Institution A, total graduate student enrolment is close to 20%, with doctoral students accounting for less than 10% of that total (Institution A, 2017a). These students can be found across all faculties, with almost half enrolled in STEM-based disciplines including Engineering, Health Sciences, Medicine, and

Sciences (Institution A, 2017a). While the majority of graduate students are domestic, 22% of the total graduate student population is international (Institution A, 2014b).

The first introduction of doctoral education at Institution A was in the late 1940s, with the first doctorate awarded at the end of the decade (Emery, 2005). In 2015, the institution awarded more than 330 doctoral degrees (Institution A, 2016). Doctoral-level graduates play an increasingly important role in helping the institution attain the aspirations articulated in its mission, including contributing to the betterment of society and the development of global citizens (Institution A, 2014a). Indeed, an examination of the institution's current strategic plan, implemented in 2014, suggests that graduate students are a key area of focus. Within its strategic priorities, the institution expresses an interest in contributing to the need for highly qualified personnel, which in part connects to the strategic priority to increase graduate student enrolment. In achieving these two outcomes, the university strives to help graduate students to prepare for entry into their chosen careers, in part by ensuring that program and course level outcomes address the knowledge and competencies necessary for success (Institution A, 2014a). Of note is that this OIP coincides with significant institutional transitions in executive leadership at the presidential and provost levels by 2019. Leadership renewal within the graduate school may also occur in the next couple of years. These executive leadership changes may affect the institution's strategic direction as it relates to graduate students, and consequently may influence the direction of this OIP.

Organizational Aspirations and Ideological Approaches

An examination of Institution A's mission and statement of principles and values suggests that it is influenced by several ideological approaches, including critical, conservative, and neoliberal ideologies. Of particular relevance to the problem of students' career preparation is the

influence of a conservative ideology. In the context of this OIP, a conservative ideology is concerned with upholding the traditional values of the academy and approach change gradually so that new elements integrate within established traditions (Gutek, 1997). This ideology is seen in the hierarchical structure of the university, where each member is given a rank and a role (Gutek, 1997), and from where decision-making flows. In the case of graduate education, a vice-provost oversees the graduate school and works collaboratively with departments across campus to ensure a high quality of education, as well as to ensure the institution is a destination of choice in graduate education. However, the primary responsibility for graduate education lies within the university's departments (Institution A, n.d). Under this decentralized model, graduate chairs lead the decision-making process and ensure the smooth day-to-day functions of graduate education, as well as the overall academic quality of their respective programs (Institution A, n.d).

PESTE Analysis

Understanding the external environment and how external factors drive the need for change helps leaders determine whether they need to respond (Cawsey, Deszca, & Ingols, 2016). The external factors that can impact an organization include political, economic, social, technological, and ecological/environmental; taken together these factors are referred to as PESTE (Cawsey et al., 2016). Within the context of this OIP, the PESTE analysis focuses only on political, economic, and social factors.

Political and economic factors. One way to understand the issue of student preparation for diverse careers is through political and economic lenses. The government has an interest in PhD production, and not necessarily for entry into the professoriate. Rather, doctoral degree holders make significant contributions to the knowledge economy and help drive the economy in a

variety of sectors. Increasing the number of doctoral degree holders benefits the economy. Consequently, the government has intervened on several fronts including by investing in resources (e.g., MyGradSkills) and internship opportunities (e.g., Mitacs) designed to help students develop competencies required for diverse careers. Further, several agreements (e.g., Strategic Mandate Agreement, Graduate University Degree Level Expectations) between the provincial government and Institution A compel the university to engage in activities that help prepare students for diverse careers. Drawing closer connections among the economy, education, and employability, as well as holding universities to greater account, the political and economic contexts influence institutional responses to the challenge of preparing students for the careers they get or that are available rather than the ones they want.

Social factors. Another way to understand the issue of student preparation for careers outside of academia is through the social context, framed by employer expectations and societal views of the purpose of public education. Employers and business leaders argue that the specialized nature of the doctorate creates a disconnect with real world problems, creating graduates who lack a practical focus and the skills necessary for success in a variety of careers (Cumming, 2010a; Manathunga et al., 2012; Nyquist & Woodford, 2000). This sentiment is echoed by society at large, who believe that publicly funded institutions "…have a responsibility to prepare scholars to make a positive difference in society" (Porter & Phelps, 2014, p. 55). Employer and societal expectations help to strengthen the position that academic institutions need to be actively engaged in preparing students for careers beyond the academy. A more in-depth PESTE analysis, in which the political, economic, and social factors driving the institution's need to better prepare PhDs for diverse careers, is explored in more detail in Chapter Two.

Supervisory Style and Practice

As already noted, a vice-provost provides leadership for graduate student education at Institution A and graduate chairs in each department play leadership roles in operationalizing graduate education. Graduate supervisors, however, are the main source of leadership for students and play a significant role in the student experience and expectation setting. In fact, research suggests that positive relationships with supervisors are associated with higher completion rates and faster times to completion (Girves & Wemmerus, 1988; Lovitts, 2001). Further, students report relationships with faculty as both the most important and most disappointing aspect of their graduate education (Hartnett & Katz, 1977). Leadership, advice, and support provided by supervisors are critical to one's student experience (Nyquist, Woodford, & Rogers, 2004).

Supervisory management grid. Behavioural theories of leadership (Blake & Mouton, 1964; Bowers & Seashore, 1966) characterize the leadership style and practice of doctoral supervisors. Gatfield (2005) posits a model of student supervision that focuses on two sets of factors that inform supervisors' preferred management styles. Support factors supplied by the institution and supervisors include elements like financial needs and technical support. Structural factors include elements supplied by the supervisor through negotiation with the student. These include goal setting, progress reports, supervisory input, and supervisor availability. Figure 1.1 demonstrates how Gatfield (2005) uses these two sets of factors to form an axis, to which he assigns four distinct quadrants representing four supervisory styles: laissez-faire, pastoral, contractual, and directorial.
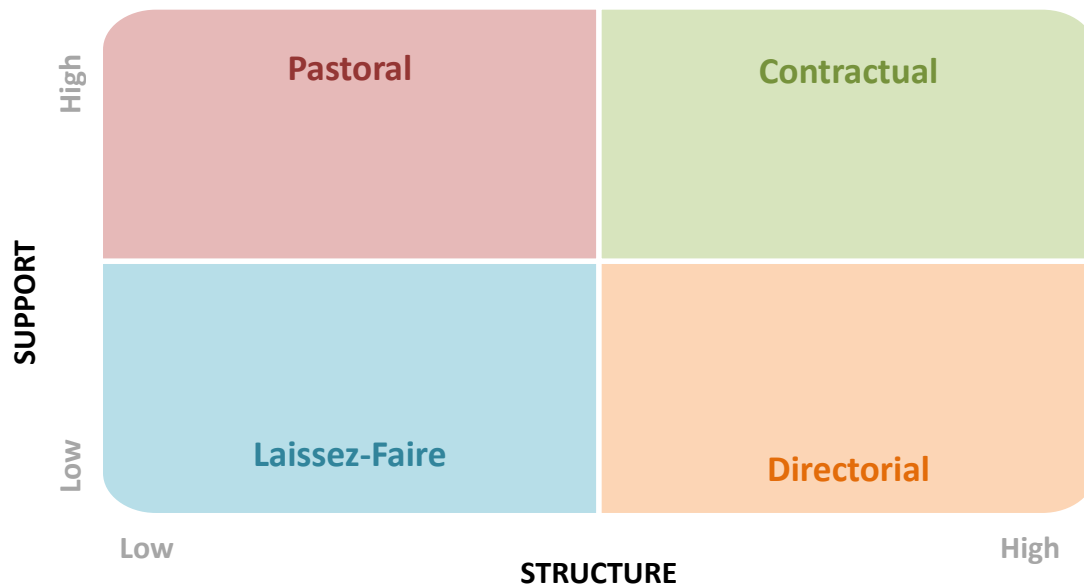
Figure 1.1. Supervisory management grid, reflecting factors that inform supervisors' preferred supervisory styles. Adapted from "An investigation into PhD supervisory management styles: Development of a dynamic conceptual model and its managerial implications," by T. Gatfield, 2005, *Journal of Higher Education Policy and Management, 27,* p. 317.

In addition to the four supervisory styles, Gatfield (2005) also identified supervisory

characteristics associated with each style. Table 1.1 summarizes the dominant characteristics of

supervisors under each supervisory style.

Table 1.1

Characteristics of Four Supervisory Styles

Style	Characteristics of supervisor
Laissez-faire	• non-directive and not committed to high levels of personal interaction • may appear uncaring, uninvolved
Pastoral	• provides considerable personal care and support, but not necessarily in a task-driven directive capacity
Directorial	• has close and regular interactive relationship with candidate, but avoids non-task issues
Contractual	• able to administer direction and exercises good management skills and interpersonal relationships

Adapted from "An investigation into PhD supervisory management styles: Development of a dynamic conceptual model and its managerial implications," by T. Gatfield, 2005, *Journal of Higher Education Policy and Management, 27,* p. 317-318.

According to Gatfield (2005), these supervisory management styles change over time and are dependent on either abnormal conditions (e.g., a candidate is in crisis) or key transition periods (e.g., progression from year one to year two of studies). A typical path in a supervisor's leadership of a student is contingent on the phase of doctoral completion. Figure 1.2 demonstrates how supervisory management styles change over time, depending on the stage of the student's program.
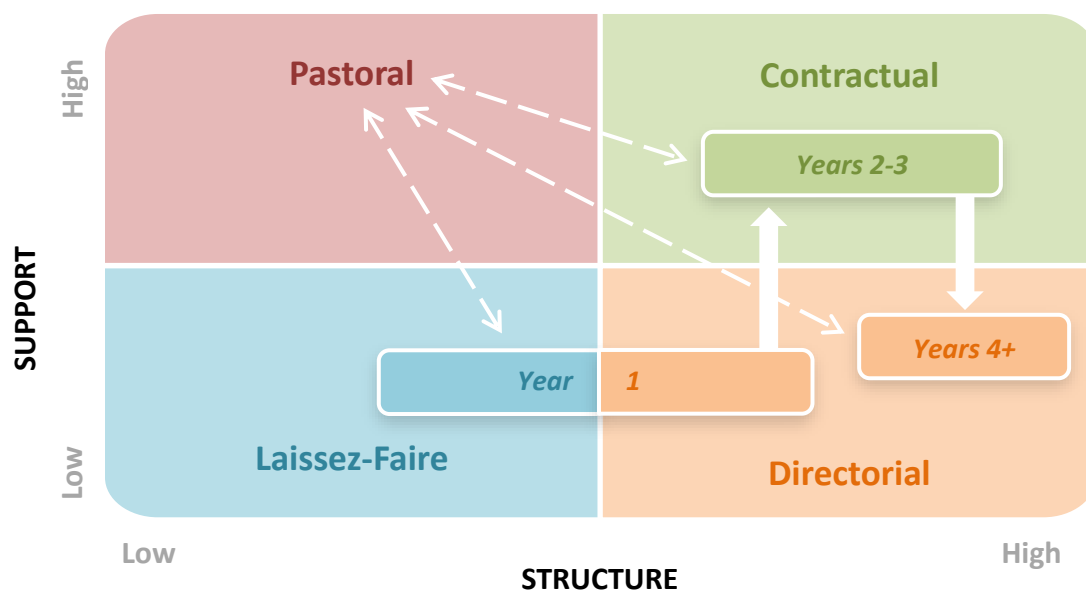
Figure 1.2. Supervisory management and changes over time. Adapted from "An investigation into PhD supervisory management styles: Development of a dynamic conceptual model and its managerial implications," by T. Gatfield, 2005, *Journal of Higher Education Policy and Management, 27,* p. 322.

As Figure 1.2 demonstrates, in their first year of study, when students are largely unfocused and searching for a thesis topic, the leadership provided by a supervisor is often characterized by little structure and limited support. Once a thesis topic is identified and the research questions evolve, with Gatfield's model one would expect the supervisor's leadership style to shift towards more structure to assist with research design and methodological development. As a candidate moves into their second year and through their third year of studies, where they are undertaking data collection and analysis, high levels of support and structure may be required from the

supervisor. Finally, as the candidate moves into the final years of their program and are focusing on writing their thesis, the leadership style may shift again to provide less support, but still maintain high levels of structure. At any point in the students' academic career, the supervisor may shift into a pastoral style of supervision, typically in response to a crisis, feelings of discouragement or frustration by the student.

Supervisory style and career development support. Gatfield's (2005) model, in which supervisory management styles adjust based on the shifting needs of the doctoral candidate, has implications for the ways in which supervisors approach their students' careers. For students who are questioning career options and may want to explore paths other than academia, a supervisor with a laissez-faire approach will provide little career guidance or support for alternative pathways. Conversely, a supervisor who prefers a pastoral style may be useful to talk through career options, but will not necessarily help in the career decision-making process. A directorial supervisor may be most interested in keeping the student focused on thesis completion and show little inclination to entertain career conversations beyond those of an academic career. A contractual supervisory style may be best suited to students who have an academic career interest, but who are also interested in exploring other options. Under these circumstances, a supervisor who applies a contractual style assists the student in degree completion, while also being open to supporting diverse career aspirations.

Leadership Position Statement

As a senior-level administrative leader within student services at Institution A, the work of my unit directly relates to the problem of preparing students for careers both inside and outside academia. Through my role, I have an opportunity to contribute to discussions about the problem with executive-level leaders, senior academic leaders, graduate supervisors, and students.

Similarly, my role has allowed me to help shape the institution's response to the problem.

Throughout these discussions, my leadership approach and my understanding of the problem has

been reflective of my alignment with liberal approaches to education (Gary, 2006; Raven, 2005),

transformational leadership (Kouzes & Posner, 2002), and situational leadership (Blanchard,

Zigarmi, & Zigarmi, 2013) theories, and the value I place on relationship building and

communication.

Liberal Ideology

I see the world through a liberal lens, and my leadership position fits with that approach in

two ways. First, a liberal lens sees each person as a unique individual (Gary, 2006). Second, a

liberal lens supports the idea of individual choice (Raven, 2005). In both instances, this

worldview has implications for the way in which I see the PoP. From the perspective of student

career preparation, a liberal lens supports my view that one size does not fit all. Each candidate's

career path is different and doctoral supervisors need to honour and support these differences.

Similarly, the institution needs to acknowledge that there are many career paths for PhDs and

that increasing numbers are interested in careers outside academia; the doctorate is valuable

preparation for more than just academic careers. The uniqueness of each candidate and the

freedom to choose their own career path guides my commitment to helping prepare students for

the careers that interest them.

Theoretical Approach

From a theoretical perspective, my leadership approach reflects elements of transformational

leadership and situational leadership. Transformational leadership is concerned with a leader's

ability to adapt to followers, as well as modeling behaviour such that followers are inspired to

grow (Northouse, 2016). Situational leadership emphasizes flexible and adaptable responses

from the leader depending on the situation (Northouse, 2016). From a transformational leadership perspective, I believe in the importance of challenging the process and in enabling others to act (Kouzes & Posner, 2002). From a situational leadership perspective, I believe it is important to adapt my approach to meet the demands of different situations by assessing each context, individual need, and interaction, and then proceeding accordingly. This approach also applies to the value I place on communication, in that it is important to understand my audience and adapt my communication style, messaging, and approach accordingly. These leadership approaches are especially applicable in addressing the PoP. For example, key stakeholders include faculty members who hold deeply entrenched ideas about the purpose of doctoral education; the approach needed to persuade them to see other perspectives is different from that of other stakeholders.

Developing and maintaining positive relationships in the workplace is critical to my success as a leader. Thinking about workplace relationships reminds me of my counsellor training; from a client-centred approach, the main tenets of empathy, unconditional positive regard, and genuineness are key to building rapport with clients (Hill & O'Brien, 1999). I find these tenets to be highly transferrable to both relationship building and communication, and I apply them in my leadership practice. Working from these beliefs, I can build rapport with members of the campus community, promote positivity, and build good will that will assist in exerting influence over the PoP.

My role, as it relates to the institution's need to prepare students for diverse careers is one of advocate, content expert, and committee member. While my sphere of influence does not extend to shifting the culture within my institution, or to the creation of new practices in graduate education, it allows my voice to be amongst those leaders at the institution who do have the

influence to make significant changes. My liberal viewpoint allows me to see students beyond

the traditional definition of academics-in-training to individuals-with-diverse-career-interests,

and to bring that perspective to key discussions. Further, it is my leadership approach, influenced

by transformational and situational leadership theories, as well as my focus on communication

and relationship building, which has led to my inclusion in relevant conversations at my

institution.

Framing the Problem of Practice

The need for universities to prepare students for careers outside of the academy has emerged

out of a broader international discussion, in which the current state of the doctoral degree appears

to be a source of debate. Some scholars and organizations argue that the doctorate is in need of

reform (Cumming, 2010b; Edge & Munro, 2015; Nerad, 2012), while others suggest that despite

some challenges doctoral education is largely effective (Altbach, 2003; Craswell, 2007;

Neumann & Tan, 2011). Proponents of reforming the doctorate cite a number of political,

economic, and social influences that shape the need for change. Amongst these factors are the

changing academic labour market, a lack of understanding amongst students about their career

options, and a lack of transferable skills amongst students (Edge & Munro, 2015; Maldonado et

al., 2013; Sekuler et al., 2013).

Theory for Framing Change

The problem of student preparation for careers inside and outside academia can be

interrogated through a review of the literature, which suggests that there are two schools of

thought around how institutions approach student preparation for diverse careers. One approach

has been to offer generic skills development workshops (e.g., converting a CV to a resume) that

help students develop competencies seen to be lacking in traditional graduate programming, but

which have been identified as critical for employment outside of academia (Bowness, 2015;

Porter & Phelps, 2014; Venkatesh, Rabah, Lamoureux-Scholes, & Pelczer, 2014). The idea of

generic skills for doctoral degrees has generated much debate in academic circles, with many

dismissing it as contradictory to the degree goal of making an original contribution to knowledge

(Craswell, 2007; Gilbert et al., 2004). In the face of this criticism, and the labour market realities

facing these students, some scholars (Cumming, 2010b; McAlpine & Norton, 2006; Porter &

Phelps, 2014) have proposed alternatives to generic skills programs that will marry the original

intention of the doctorate with the need to prepare students for diverse careers.

   Porter and Phelps (2014) theorize about a more integrated framework for career preparation,

whereby the learning relevant to one's scholarship is embedded in non-academic or non-research

settings. Their proposed model acknowledges that the purpose of doctoral education is not about

skills acquisition, but at the same time recognizes that skills development is an important

element in the development of "…professionals within and beyond the academy…" (Porter &

Phelps, 2014, p. 56). Under this integrative framework, the competencies that students develop

are "…not a side product of the PhD program but an integral assessable part of it" (Porter &

Phelps, 2014, p. 59). Considering the weakness of the academic labour market, which is resulting

in fewer students securing academic positions, a framework that places equal value on

knowledge acquisition and skills development is an important shift from current programming

models and is the desired future state that this OIP attempts to address.

   Cumming (2010b) also theorized about a framework that moves beyond the classification of

skills that all students should possess upon graduation. His approach focuses on contextualized

performance, which includes enacting skills in authentic settings (Cumming, 2010b). Like Porter

and Phelps (2014), the focus of Cumming's model is on behaviour (i.e., how are skills enacted

within the doctorate, as well as other settings) rather than on the list of skills themselves.

Drawing on practice theory, which argues that separating individuals from the social, cultural,

and historical contexts in which they function is not possible, Cumming's integrative model of

doctoral enterprise suggests that an individual's skills development cannot be separated from the

contexts in which they are developed. Figure 1.3 outlines Cumming's model.
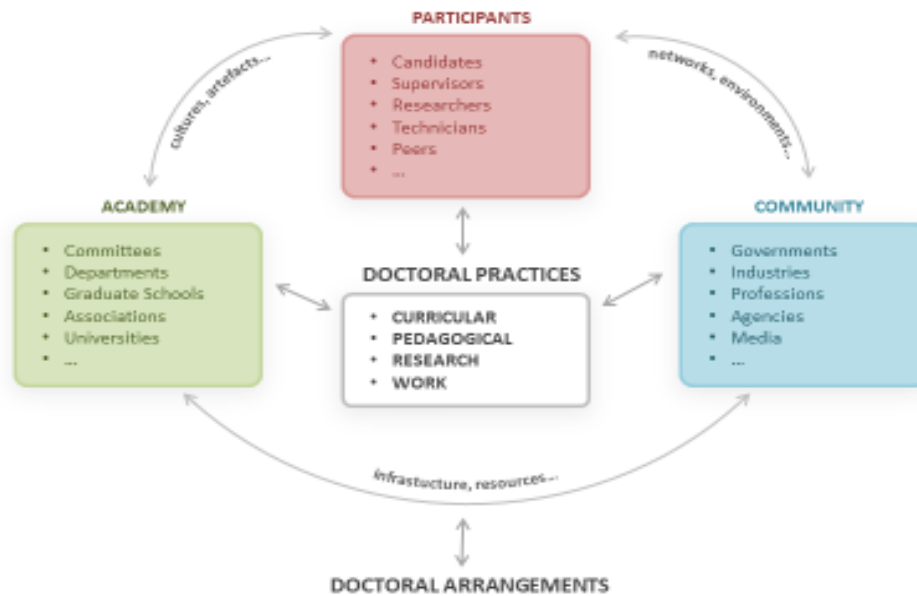
Figure 1.3. Integrative model of doctoral enterprise. Adapted from "Doctoral enterprise: A holistic conception of evolving practices and arrangement," by J. Cumming, 2010b, *Studies in Higher Education, 1,* p. 31.

Cumming (2010b) identifies doctoral practices and doctoral arrangements as two key

elements of the doctoral enterprise. Doctoral practices include not only the activities that define

doctoral studies (e.g., research, writing, publishing), but also historical, cultural, and professional

factors that affect all doctoral education stakeholders. In his model, Cumming illustrates four

doctoral practices–curricular, pedagogical, research, and work–and identifies ways in which

these practices are connected by common understandings and protocols shared by those engaged

in doctoral work. This reflects how the four types of practice connect to each other, as opposed to remaining distinct activities.

Doctoral arrangements represent the variety of relationships, networks, resources, and artefacts within which doctoral practices are embedded (Cumming, 2010b). These arrangements are more than just the environment where students work; they are reflective of a blending of social, cultural, and historical concepts. The model identifies participants, the academy, and the community as the three main components. While he acknowledges the existence of the candidate-supervisor relationship, Cumming's model suggests that other relationships may supersede it at different points of doctoral study and with varying levels of intensity. The model also reflects the influence that community or access to resources, for example, may have on a student's work.

Cumming's integrative model of doctoral enterprise reflects the intersections and overlaps that take place in doctoral education, and makes an argument to shift from a focus on skills to a focus on performance. Like Porter and Phelps (2014), Cumming does not deny the importance of skills development, but believes that skills should be developed and applied in real world contexts, rather than in supplementary curriculum. This integrative approach represents an important re-imagining of doctoral education and has implications for views on career preparation for doctoral candidates.

Leadership-focused Vision for Change

Current Organizational State

The current state of student preparation for careers outside of academia in Institution A is not unlike that at many other Canadian universities (Rose, 2012). The dominant approach to address non-academic career preparation is to offer generic workshops that help students develop

competencies seen to be lacking in traditional programming, but that have been identified as

critical for employment outside of academia (Bowness, 2015; Porter & Phelps, 2014; Venkatesh

et al., 2014). At Institution A, student career development is uncoordinated, with more than one

academic or service department leading multiple initiatives. A campus scan, which is a technique

that collects information about internal patterns and trends, catalogued the variety of ways in

which students at Institution A receive support in their career preparation. The scan illustrated

the uncoordinated nature of leadership in this area (Leckie, 2014). It revealed that while career

development takes place, it ranges from very formal programming in some departments to very

informal in others, to no identifiable programming in others (Leckie, 2014). While students seem

to value the opportunity to participate in these sessions (Porter & Phelps, 2014), at Institution A

the registration and attendance are disproportionately low, compared to the number of eligible

participants on the campus. Overwhelmingly, the programming that exists focuses on the

development of competencies required for entry into academic careers, with significantly less

focus on similar opportunities for preparation for careers outside the academy. This focus on

academic career preparation persists despite the depressed academic labour market, shifting

career motivations amongst students, and concerns over the transferability of competencies.

Envisioned Future Organizational State

At Institution A, the proposed future state for preparing students for non-academic careers is

the introduction of a mandatory transitional competencies and career development program. The

program will prepare students for employment in both an academic and non-academic context by

offering modules that help them develop and articulate key competencies, including career

competencies through the career engagement module. Appendix B illustrates the proposed

program, which reflects six competencies that result from doctoral studies at Institution A. The

career engagement modules will build an awareness of, and provide information about the state

of the academic labour market, the diversity of career options available, and translating

competencies, knowledge, and experience into a language understood by employers outside of

academia. In addition to helping students feel more prepared for diverse career options, the

program will distinguish the institution as a leader in the area of graduate student career

development. Consequently, Institution A will realize greater enrolment and retention numbers,

and graduates may report higher levels of satisfaction with the career supports they receive

during their degrees.

Priorities for Change

Realizing the future organizational state involves engaging three stakeholder groups, each

with differing priorities. In the short term, change priorities will focus on micro-level initiatives

that can help establish the conditions necessary for an institutional culture shift. This includes

initiating discussions about the identified problem with the key stakeholder groups, outlining

why a coordinated campus response to student career preparation for diverse careers is

important, and establishing agreement on the need to address the problem. In the mid-term,

change priorities will focus on identifying programming needs, drafting pilot programming,

seeking feedback on the programming model, and piloting the program with students. In the long

term, this change initiative will result in a culture change within the academy, which will require

the institution, supervisors, and students to re-frame the purpose of the PhD.

The success of this change initiative partly rests with the ability to infuse "…the need for

change throughout the organization…" (Cawsey, et al., 2016, p. 320). Consequently, the

development and implementation of strategies that persuade these stakeholder groups that

change is necessary is the initial priority. Internal and external data will demonstrate how

preparing students for diverse careers is valuable. For example, at the institutional level, the strategic plan provides an internal roadmap of the goals associated with graduate student career preparation. In addition, internal data about retention rates and the reasons why PhDs do not complete their degrees will provide rationale for this OIP. From a student perspective, external employment data and employer perspectives on preparedness for entry into the non-academic labour market demonstrates the need for change. These data will provide greater awareness and new information about future employment opportunities and options.

Internal and external data will inform communication strategies with stakeholder groups, including in individual and departmental meetings, presentations to executive and senior administration, faculty, student leaders, and student groups. Establishing the need for change up and down the organizational hierarchy will be critical in achieving the buy-in necessary to incorporate mandatory career-related programming into the student experience at the institution.

Change Drivers

Internal and external drivers influence calls for institutions to help prepare students for careers inside and outside the academy. Externally, the proliferation of news items points to what some refer to as a crisis in the academic labour market (Chiose, 2013; Fullick, 2012; Iqbal, 2015). The gap between supply and demand for academic positions continues to grow, which is one driver behind the proposed change. A second external driver for the proposed change is the provincial creation of the graduate degree level expectations (GUDLEs). The GUDLEs articulate the inclusion of career preparation within doctoral programs, and institutions are compelled to respond appropriately. The proposed change will help to ensure Institution A complies.

In addition to external change drivers, there are internal factors that advance the change practice. These are primarily associated with groups advocating for change, including students,

committees considering the broader definition of the PhD, and the author of this OIP as a change agent. Faculty members and members of the institution's executive leadership team lead these committees, and their responsibility symbolizes a change in vision and strategy for the doctorate at the institution.

Organizational Change Readiness

In assessing an organization's change readiness, leaders must have their own understanding of the need for change before they can persuade others (Cawsey et al., 2016). The authors identify four pieces of information that will help inform a leader's understanding of the need for change, including internal and external data. Under their change path model, at the initial step, referred to as the awakening stage, a change leader uses internal and external data to understand the forces that will positively and negatively affect a change initiative (Cawsey et al., 2016).

Forces Shaping Change

External forces shaping the need for Institution A to better prepare students for careers outside of academia are twofold: changes to the economy influence the availability of academic positions, while at the same time the provincial government has redefined GUDLEs for universities. Just two decades ago, most doctorate holders could expect to secure an academic position following graduation (Osborne, Carpenter, Burnett, Rolheiser, & Korpan, 2014). Today, the majority who pursue doctoral studies, and the institutions that admit them, still largely assume that PhD holders will secure academic professorships (Edge & Munro, 2015). For many reasons, this is not the reality, even under ideal labour market conditions, which do not presently exist. Consequently, the current depression of the academic labour market is one external force that is driving the need for changes to the way in which students at Institution A prepare for diverse career paths.

Government interventions in defining graduate degree level expectations is a second external factor that informs the need to provide greater institutional support in preparing students for non-academic careers. According to the province's expectations as outlined in the GUDLEs, doctoral programs are accountable for providing an environment in which students can develop "…the qualities and transferable skills necessary for employment…" (Ontario Universities Council on Quality Assurance, 2015). Institution A has adopted the GUDLEs and begun to implement the expectations related to the academic criteria (e.g., depth and breadth of knowledge, research, and scholarship). However, Institution A lags in addressing the professional capacity/autonomy expectation, particularly as it pertains to preparing students for the non-academic careers that many graduates will eventually enter. This governmental imperative, which directs institutions to address specific standards in their academic programming, is an external factor that shapes the need for Institution A to address the level of preparation provided for careers outside of academia. Appendix C outlines the complete list of GUDLEs for doctoral education in Ontario.

While information from external sources provide "...important clues and cues for change leaders" (Cawsey et al., 2016, p. 39), internal information is also important. One of the primary internal forces shaping the need for change is the perspective of internal stakeholders, and primarily students themselves, who will be one of the recipients of change. Cawsey, Deszca, and Ingols (2016) suggest that recipients of change can help to "…define the problem, design solutions, and implement them" (p. 222). Stoll (2006), in reflecting specifically on an educational context, suggests that students should play an integral role in change initiatives. To date, student engagement and leadership have been hallmarks of this particular change initiative at Institution A; students initially helped to identify the problem. As students begin to understand the trend towards fewer full-time tenure track academic positions and the resulting need for an

increase in more diverse employment destinations for PhDs, their advocacy on the issue underscores the importance of greater levels of institutional support for non-academic career development.

Tools to Assess Change Readiness

According to Cawsey et al. (2016), several factors affect an organization's change readiness including organizational structure, flexibility, adaptability of the culture, and member confidence of leaders. Drawing on a number of tools, Cawsey and colleagues developed a questionnaire that leaders can use to assess an organization's readiness for change. It examines change readiness on seven dimensions, including executive support, credible leadership and change champions, and openness to change. In reflecting on the issue of institutional support for students preparing for careers outside of academia, the questionnaire assists in understanding the dimensions on which Institution A is ready for change, as well as the dimensions on which to focus more attention. For example, on the dimension that measures credible leadership and change champions, change leaders are asked to assess the organization's ability to "…attract and retain capable and respected change champions" (Cawsey et al., 2016, p. 109). In assessing Institution A, this item receives a positive endorsement because of the involvement and support of several members of senior administration, graduate chairs, supervisors, and graduate student leadership. On the openness to change dimension, one item asks if the proposed change will be seen as "…generally appropriate for the organization by those not in senior leadership roles" (p. 109). On this item, Institution A receives a negative endorsement. Seen primarily as solely preparation for an academic career, many faculty members are not prepared to support a change that broadens the definition of the doctorate's purpose. Until this shift happens, the institution is not entirely ready for a change, and more engagement of some members of key stakeholder groups is required.

Chapter Summary

Chapter One identified the issue of student career preparation as a problem of practice and situated it in the broader organizational context of Institution A. Political, social, and economic factors inform the problem of practice, and the influence of institutional history and various stakeholders was examined. A future organizational state that addressed the problem of practice, as well as elements of an OIP were introduced. Chapter Two focuses on the development of a leadership framework, examines potential solutions to the problem of practice, and identifies a change path model.

Chapter Two: Planning and Development

Chapter Two delves into the planning and development stages of the OIP. Specifically, a

framework for leading change and a critical organizational analysis address the how and what of

the change process. Three possible solutions to address the problem are evaluated and one

solution is proposed for implementation. The chapter introduces adaptive leadership as the

leadership approach that underpins the OIP, and the chapter considers leadership ethics and

organizational change.

Framework for Leading the Change Process

An organization's desire to be responsive to increasing external and internal pressures

necessitates the organizational change process. In the case of preparing students for diverse

careers, specific economic, political, and social clues (identified in Chapter One and discussed in

more detail later in this chapter) suggest there is a need to address the issue and illuminate areas

that need to change. However, these clues do not offer a framework for the change process.

According to Cawsey et al. (2016), leaders must be attuned to both the process of leading

organizational change (i.e., the how), as well as the content that needs to be changed (i.e., the

what). Further, organizational change requires multiple levels of engagement (e.g., individual,

unit, organization) and, consequently, the application of more than one framework is needed

(Cawsey et al., 2016; Hurd, 2007). The process to address the problem of practice outlined in this

OIP draws on Kotter's (1996) Eight-Stage Model of Organizational Change, as well as Duck's

(2001) Five-Stage Change Curve.

Kotter's Eight-Stage Model of Organizational Change

Kotter's (1996) Eight-Stage Model of Organizational Change is a process that prescribes a

structured and systematic approach to change. The model consists of eight sequential steps that

articulate what a leader should do and when, as well as signal when it is time to move to the next

stage (Kotter, 1996). Figure 2.1 identifies the eight steps that an organization must complete to

help ensure successful change.
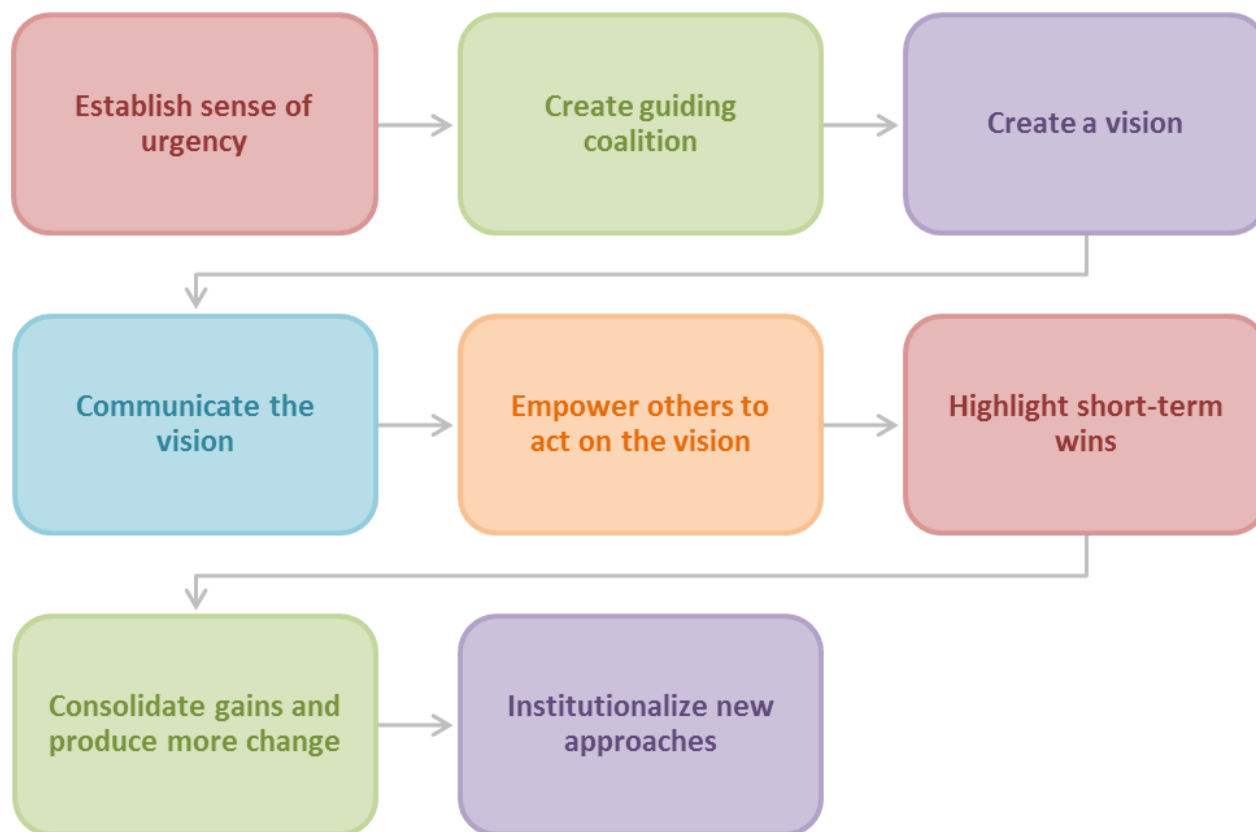
Figure 2.1. Eight stages of organizational change. Adapted from "*Leading Change,*" by J.P. Kotter, 1996, p. 21.

Kotter's model has three key strengths that will benefit the change process undertaken by this

OIP. First, it provides simple and structured direction for the change leader. Organizational

change can be messy and overwhelming, and the checklist nature of the model is an approach

that can mitigate these challenges. Second, Kotter's model is especially relevant if people are

ready for change (Barlow, 2017). Fullick (2015) suggests that the issue of PhD overproduction is

not a new dilemma, having traced it back at least 30 years, yet it is a recurring theme in current

commentary about doctoral education. This current focus on the PhD issue and an increasing

willingness at Institution A to explore the problem, suggests the institution has arrived at what

Gladwell (2000) refers to as a "tipping point". Campus conversations about the purpose of the

doctorate have gained momentum, and there is a sense that people are ready to explore change.

The third strength of Kotter's model is that it is an effective and tested model for organizations

that have a classic hierarchical structure, such as Institution A (Nauheimer, 2009).

A key criticism of Kotter's (1996) model is that it is too mechanistic, overlooking the fact that

organizations consist of real people with unique reactions to change (Reynolds, n.d.). To

counteract this criticism, Duck's (2001) model provides balance. Duck (2001) sees change as an

inherently emotional and human process, and applies a five-stage model, referred to as the

change curve, for understanding and managing the human element of the change process. The

five steps are stagnation, preparation, implementation, determination, and fruition. At any stage

of a change process, emotions can surface, and, according to Duck (1993), the leader needs to

manage these feelings to implement change successfully. Figure 2.2 demonstrates the

intersections between the two models.

Process for leading change.

Establish a sense of urgency. The first step in Kotter's (1996) process is to establish a sense

of urgency. When it comes to change, Kotter suggests organizations frequently lack a sense of

urgency and run the risk of becoming complacent. Duck (2001) agrees with Kotter, likening the

complacency observed in organizations to stagnation, and suggests stagnation often ends once a

leader resolves that things are going to be different. To awaken organizations from their malaise,

leaders must alert organizational members to the variety of threats to the system. This is

accomplished by using internal and external information to illustrate market and competitive

realities, as well as to identify and discuss existing crises, potential crises, or major opportunities (Duck, 2001; Kotter, 1996). In addition to quantitative data, Duck (2001) reminds leaders to pay attention to what she refers to as internal and external emotional data. Emotional data comes from listening to what both internal and external stakeholders say about the problem. In the case of this OIP, both internal and external quantitative and emotional information compels the institution to act. Externally, statistics about the career pathways of PhD holders, government expectations about an institution's obligation to support student career development, and exemplars from competitors highlight the institution's threats and opportunities. Internally, information about student retention and completion rates (Lovitts, 2001), as well as feedback from students about the lack of support as a factor in attrition (Fullick, 2013a; Lovitts, 2001), add to a compelling narrative that suggests it is time the institution turn its attention to the issue of student career preparation.
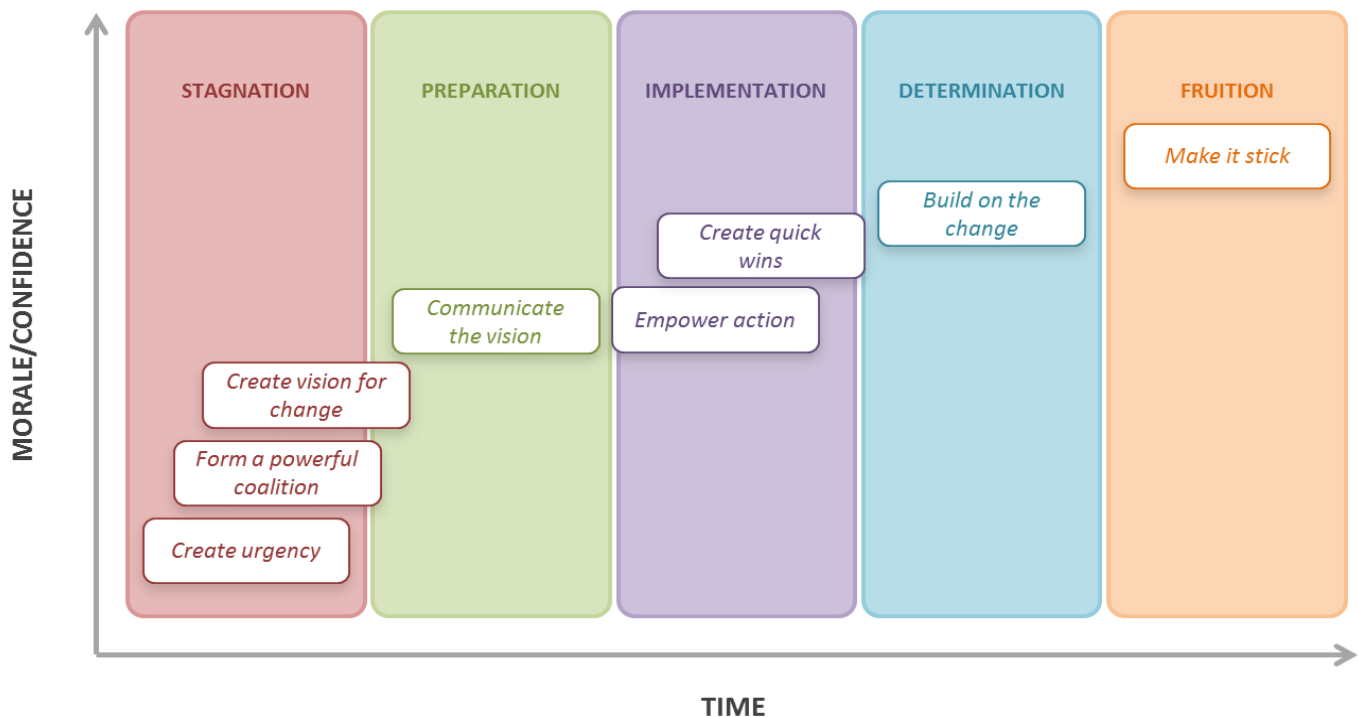
Figure 2.2. Integration of eight-stage organizational change model and five-stage change curve.

Adapted from "*Leading change,*" by J.P. Kotter, 1996, p. 21. (1996) and "*The change monster: The human forces that fuel or foil corporate transformation and change,*" by J.D. Duck, 2001, p. 16-17.

   Create a guiding coalition. Once members of the organization have awakened from their state of complacency and have moved from invulnerability to vulnerability, the second stage in Kotter's (1996) process is to create a guiding coalition. In considering membership for the coalition, Duck (2001) submits that alignment amongst members is critical and misalignment will result in failure of the change initiative. Additionally, Kotter identifies three characteristics of a productive guiding coalition. The first is finding the right people, which must include "…strong position power, broad expertise, and high credibility" (Kotter, 1996, p. 66). The second characteristic is the ability to create trust. Kotter says trust can be created through off-site meetings where members can have open discussions, strengthen communication, and broaden mutual understanding (Kotter, 1996). Trust is an important element in the change process and extends beyond how the coalition feels about each other. According to Duck (2001), how others see members of the coalition is also important, and suggests that there needs to be credibility amongst the leadership group. Finally, a common goal that is "…sensible to the head and appealing to the heart" (Kotter, 1996, p. 66) supports the success of a change initiative. To address the problem of practice, a robust coalition of individuals has already begun the work of dissecting the issue. Its members include a Vice-Provost and Associate Vice-Provost, student leaders, administrative leaders, supervisors who are already actively engaged in the work of supporting students in preparing for diverse careers, as well as conscientious objectors. The coalition's membership aligns with the first two characteristics articulated by Kotter (1996), and has engaged in several retreats to build the trust that Kotter says is so critical.

Compelling vision. At the third stage, a compelling vision for the organization's future state is developed and communicated. Kotter (1996) defines vision as "…a picture of the future with some implicit or explicit commentary on why people should strive to create that future" (p. 68). A good vision, according to Kotter, accomplishes three things. First, it clarifies the direction of change, helping people to understand that things are changing and articulating the reasons to pursue new goals. This stage aligns with elements of the preparation phase of Duck's (2001) change curve. In the preparation phase, leaders need to align around the vision and generate dissatisfaction with the status quo, helping people see what is possible. According to Kotter (1996), a vision will also motivate people to act against their short-term self-interests, even though the idea of change might make them uncomfortable. The vision also coordinates people's actions quickly and efficiently (Kotter, 1996).

Securing buy-in. The fourth step in Kotter's (1996) process is to engage a critical mass of individuals to buy-in to the opportunity and to drive the change. The success of this step relies heavily on the work undertaken in the first three steps. If the urgency of a situation is not substantially high, if the coalition is not the right group of individuals, or if the vision is unclear, communicating the vision is an almost insurmountable challenge. Even when the first three change stages go well, this stage can present challenges. Kotter identifies several key elements for effectively communicating vision, including several that overlap with Duck's (2001) recommendations for effective communication strategies. Three elements that are especially applicable to this OIP are leading by example, utilizing multiple communication channels, and engaging in two-way communication (Duck, 2001; Kotter, 1996).

Supportive structures and systems. In the fifth stage, organizational structure and systems need to support, rather than hinder, the change (Kotter, 1996). As the organization sees more

members engaging in the change process, many obstacles remain, and the leader needs to take steps to remove the barriers. According to Kotter, structure, skills, systems, and supervisors are four major barriers to employees feeling empowered to take action. In the case of this OIP, structure and supervisors are especially relevant. The formal structure of the PhD, with its emphasis on teaching and research, comprehensive examinations, and dissertations, does not make space for students to engage in activities that are relevant for non-academic career preparation including internships, career workshops, or non-academic conferences.

Short-term gains. Kotter's (1996) sixth stage focuses on keeping employees motivated by highlighting short-term gains, stating that "major change takes time, sometimes lots of time" (p. 119). In the interim, it is important to celebrate immediate results that provide evidence people's efforts are paying off. Kotter suggests focusing on wins that are visible to large numbers of people, are indisputable, and clearly connect to the change initiative. Duck (2001) refers to this as the implementation stage. Like Kotter, Duck (2001) argues it is important to communicate and celebrate wins as early as possible, as a means of promoting pride in accomplishments and sustaining energy toward future gains. Duck (2001) advocates for a "test then deploy" (p. 154) strategy, which allows organizations to test and perfect an initiative on a small scale before a larger roll out. In the case of this OIP, a pilot initiative with a small group of students will be undertaken. Among other things, the pilot can build morale and motivation amongst change agents, help fine-tune the vision and strategies, and provide evidence to executive leadership that the change is progressing, which Kotter (1996) identifies as key to the value of producing short-term gains.

Consolidate gains. On the heels of short-term gains, stage seven consolidates gains and produces more change. According to Kotter (1996), there is a tendency at this stage to coast on

the momentum from short-term gains. Duck (2001) notes that in this phase, which she refers to as determination, there is a danger of retreat and a return to old ways of doing things. Both Kotter and Duck caution against taking a break, suggesting it sends the message that the hard work is complete. Rather, to ensure a successful transformation, Kotter (1996) argues that stage seven involves more change, not less, and leaders must maintain clarity on the shared purpose of the work, as well as maintain urgency levels. In the case of this OIP, moving from pilot programming that is optional to mandatory participation will be the key at this stage.

   Institute the change. The final stage of the process is to institute the change. This step of the process focuses on changing the culture of the institution. For Kotter (1996), it first requires changes in people's actions, which result in sustained group benefit, and recognition of the connection between new actions and improvement. Similarly, Duck's (2001) final stage, fruition, focuses on how individuals embed the capabilities and attitudes that generated the change into new ways of doing things moving forward. At Institution A, the result of the change process is the introduction of a centrally coordinated mandatory transitional competency and career engagement program that addresses the PoP. In part, the proposed program will increase awareness of the career development cycle, help students understand the breadth of careers available to doctoral degree holders, and help prepare them for entry into both the academic and non-academic labour market.

Connecting Change Models to Organizational Context

   Believed by many to be seminal work in the field of organizational change (Aiken & Keller, 2009), Kotter's (1996) change model was originally applied to initiatives in a variety of sectors including manufacturing, finance, and services. While not initially tested in an academic institution, since its introduction, a number of academic institutions have effectively led change

initiatives using Kotter's model (Abrahamson, 2008; Hurd, 2007; Stich, 2008). For example,

Hurd (2007) demonstrates how the steps identified in Kotter's model mapped onto the

internationalization change initiatives at three universities. Abrahamson (2008) shows how

Kotter's model was represented in steps undertaken on a student learning outcomes initiative by

a community college. She notes that, while some challenges were experienced at the first stage,

persistent use of the model eventually helped overcome the challenges and move the change

initiative forward to positive outcomes (Abrahamson, 2008).

Kotter himself acknowledges the relevancy of the model to higher education, noting that

universities face challenges at every turn (Goldberg, 2015). Pointing to rapid technological

changes or the concept of tenure, Kotter suggests universities must be responsive to a more

sophisticated world, and consider changes for the twenty first century as a means of keeping pace

with societal change (Goldberg, 2015). What is missing in the current higher education

landscape, according to Kotter, is urgency (Goldberg, 2015). For Kotter, not enough deans,

presidents, and other institutional leaders are generating the sense of urgency needed to support

change initiatives, despite glaring needs for change. Leaders in higher education need to

understand how the world is changing and create the conditions that will help others in the

institution see the potentially harmful impact of choosing not to respond (Goldberg, 2015).

Researchers who have applied Kotter's model to higher education change initiatives note one

criticism, which is that the linear nature of the model is not realistic (Hurd, 2007; Kisunzu,

2011). In the three cases Hurd (2007) explores, he notes the following:

> Kotter proposes a very linear and structured change process, while this study's findings
> emphasize something quite different. For example, communication created buy-in, which
> begat new champions, who pursued new opportunities, which lead to institutionalization,
> which in turn enhanced additional buy-in. (p. 257)

Cameron and Green (2004) make a similar observation about the deficiency of Kotter's (1996) model. They have their own model of organizational change that closely mirrors Kotter's model, but rather than a linear progression through the eight steps, Cameron and Green (2004) view the stages as a continuous cycle.

Despite this criticism, the eight stages of Kotter's (1996) model are relevant to this OIP. The model is especially useful in addressing the early stages of the change process, highlighting the need for change, and maintaining high levels of communication across the entire process (Cameron & Green, 2004). To help address the challenges of linearity in Kotter's (1996) model, elements of Duck's (2001) change curve model are considered. Like Kotter, Duck's model approaches change in phases. Unlike Kotter, Duck (2001) acknowledges the phases can occur at variant speeds within an organization, and consequently different parts of an organization may be in different phases of the change curve. Similarly, some phases overlap with each other, so it is not necessarily the case that one phase must be completed before moving onto the next one in order for the initiative to be successful (Duck, 2001). Using Duck's model to complement Kotter's, as well as applying flexibility based on what works best for the institution, can help to ensure successful change implementation at Institution A.

Critical Organizational Analysis

While the question of how to change is important, equally critical is the question of what to change. According to Cawsey et al. (2016), change leaders need "…the ability to diagnose organizational problems and take actions to change an organization" (p. 64). They identify several frameworks that facilitate the analysis of an organization, including Nadler and Tushman's (1980) congruence model. The congruence model focuses on the congruence between an organization's work, people, formal organization, and informal organization. The

greater the congruence between these four elements, and the more aligned these elements are with external realities and organizational strategy, the better the organization performs. Figure 2.3 illustrates the components of the congruence model.
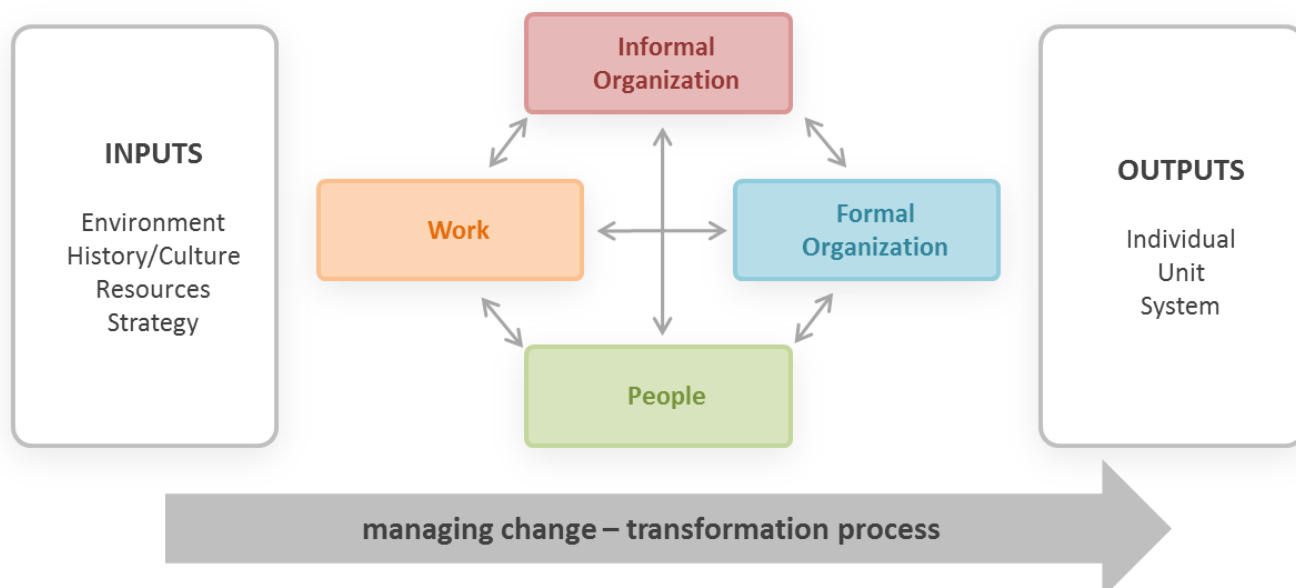
Figure 2.3. Organizational congruence model. Adapted from "A model for diagnosing organizational behavior," by D.A. Nadler and M.L. Tushman, 1980, *Organizational Dynamics, 9.*

What Needs to Change and Why

Inputs. Nadler and Tushman (1980) identify environmental factors, institutional history/culture, resources, and strategy as factors that influence the change process. A partial PESTE analysis illustrates political, economic, and social variables as three key factors relevant to the problem of practice.

Political and economic factors driving the need for change. One way to understand the problem of student preparation for diverse careers is through political and economic lenses. University responses to the growing disconnect between the realities of the academic labour market and students' preparation for careers inside and outside of the academy has gained the

attention of the Canadian federal and provincial governments. Governments at both levels focus on two main economic points: (a) there is a connection between education and the economy; and (b) students' preparation for entry into non-academic careers is inadequate.

In 1996, the Organisation for Economic Co-operation and Development (OECD) recognized knowledge as "…the driver of productivity and economic growth…" (Aspenlieder & Vander Kloet, 2014, p.26), and started looking more closely at the role of learning in economic performance. Charbonneau (2011) notes that the knowledge economy has long been promoted by the federal government as the key to Canada's future prosperity, quoting then Finance Minister Jim Flaherty, who stated "our greatest renewable resource is our grey matter" (para. 4). Indeed, the number of PhDs that a country produces is a key indicator "…of a developed and growing knowledge economy…" (Aspenlieder & Vander Kloet, 2014, p. 26). And while the number of Canadian PhDs has increased in the past 20 years, "…we still fell from 20th to 23rd spot among OECD countries in the number of PhD graduates per capita during that time" (Charbonneau, 2011, para. 2). To compete on the global stage, the Canadian government wants to continue to increase the number of doctoral graduates, especially the *right* (i.e., those prepared to contribute expertise outside the professoriate) kind of PhDs (Maldonado et al., 2013). To be competitive amongst our OECD counterparts, Canadian universities cannot simply produce PhDs for entry into the professoriate; rather Canada needs to produce PhDs who are prepared to work in the broader economy (Aspenlieder & Vander Kloet, 2014). The issue is not necessarily that Canada is producing too many PhDs, rather it is a matter of ensuring that those PhDs are employable outside of the academy.

On the job readiness front, the government has taken counsel from employers, who are concerned about the ability of students to successfully transition from academia to non-academic

employment (Cumming, 2010a.) In response to these concerns, provincial and federal governments have taken concrete measures to help students acquire the skills required for careers outside of academia. In 2014, the Ontario government provided funding for MyGradSkills, a series of online professional development modules designed to assist students in the development of skills for both academic and non-academic career paths. Similarly, many provincial governments have provided funding to Mitacs, which in part delivers professional development workshops and provides industry internships through which students gain valuable work experience. In these concrete ways, governments are demonstrating some degree of ownership in helping to prepare students for diverse careers. More recently, the Ministry of Advanced Education and Skills Development (MAESD) has provided career ready funding to support institutional programming that contributes to the development and expansion of experiential learning opportunities for graduate students to help prepare students for the transition to the labour market.

   At the same time as governments have shown a degree of responsibility for student career development, they have increased their expectation that universities will follow suit. As already discussed in the PESTE Analysis in Chapter One, the province has articulated GUDLEs, which underscores the government's belief in institutional obligations to not only prepare students for academic and research careers, but also for the non-academic careers that many graduates will eventually enter. Appendix C outlines all six of the degree level expectations. Of particular interest for this OIP is the professional capacity/autonomy expectation.

   Social factors driving the need for change. Socially, employers and society have articulated expectations of doctoral degree holders that require a new approach to student career preparation. With less than 20% of PhDs attaining full-time professorships, the majority of doctoral graduates

will seek employment in the public sphere (Edge & Munro, 2015). This decline of academic

work opportunities coupled with the increasingly diverse employment destinations of graduates

strengthens the argument for student career development (Edge & Munro, 2015; Gilbert et al.,

2004). Further strengthening the call for skills development are employer observations about

students' readiness for the non-academic labour market. Employers suggest that many advanced

degree holders lack the appropriate skills (e.g., teamwork, communication), attitudes, and

dispositions to effectively participate in the workplace (Cumming, 2010a; Manathunga et al.,

2012).

Beyond the labour market realities that necessitate student preparation for careers outside

academia, there is a general social expectation that publicly funded institutions "…have a

responsibility to prepare scholars to make a positive difference in society" (Porter & Phelps,

2014, p. 55). While research and teaching are two ways in which PhDs contribute to society,

these are activities whose utility are largely not understood by the average citizen, compared to

work done by PhDs in the civil service or business world, for example. Not only does society

have an expectation that those who reach the pinnacle of formal education make meaningful

contributions to advancing the social good, but also some students pursue a PhD with that in

mind (Porter & Phelps, 2014). Granting councils are also reflecting broader societal values,

requiring evidence of a project's impact on society (Porter & Phelps, 2014). Employer and

societal expectations help to strengthen the position that academic institutions need to engage

actively in preparing students for careers beyond the academy.

History/Culture. In the history of doctoral education in Canada, Institution A was a slow

adopter, introducing doctoral studies in 1947, some 58 years after the first Canadian PhD degree

was introduced (Emery, 2005). According to Emery (2005), the introduction of the PhD was

influenced by the growing qualification of the doctorate for entry into the professoriate. In the

early days of doctoral education at Institution A, the PhD was limited to medicine and sciences,

in part because of the limited financial resources allocated to research in other disciplines. In a

similar vein, research conducted by students in the sciences directly supported their supervisors'

research, whereas research conducted by students in the humanities produced a single-authored

publication (Emery, 2005). This research emphasis was a precursor to the boom of research that

marked the 1960s, and saw graduate programming eclipse undergraduate teaching as a key factor

in the tenure and promotion process (Emery, 2005). Research and graduate education became

critical to departments' national reputation and ability to attract and retain faculty. By 1992, the

dean of graduate education at Institution A declared that "Graduate studies lie at the centre of

what makes universities important to society….[they are] the pinnacle of what we do here"

(Emery, 2005, p. 17). This sentiment stands in stark contrast from that expressed in the 1960s in

which providing a solid undergraduate education was the institution's primary obligation. The

origins of doctoral studies at Institution A and the subsequent contributions that students made to

the teaching and research mission of the university reinforces a culture in which they are seen as

apprentices. This view of students and their role within the academy contributes to the barriers

that the institution experiences in implementing change initiatives that support student career

aspirations that extend beyond the professoriate.

Resources. Human capital is the largest resource requirement to enact change from the

current state of student career preparation to the desired state. An institutional strategy that helps

all students prepare for diverse careers requires the support of trained professionals (Lehker &

Furlong, 2006). At most Canadian universities, this human capital often sits in career centres. At

Institution A, the central career staff that is tasked with assisting students with career exploration

and decision-making consists of four full-time equivalent staff who serve a student population of over 30, 000. The current staffing model is inadequate to support the meaningful and tailored support PhDs require as they contemplate various career pathways. Further, additional financial resources will facilitate the introduction of experiential learning opportunities (e.g., internships) for students, providing critical hands-on experience that contributes to students' career decision-making and employability (Allen, 2013).

   Strategy. Institution A's current strategic plan articulates a number of priorities related to the PoP. These include ensuring that its graduates find employment, achieve provincially defined degree level outcomes, attain transferable skills, and are supported in the development of all aspects of themselves (i.e., students have an opportunity to develop academically, as well as in mind, body and spirit) (Institution A, 2014a). The strategic plan is akin to what Argyris (1995) refers to as an espoused theory, or the way that an organization *says* that it operates. Espoused theories are different from theories-in-use, or the way that an organization *actually* operates, and there is often "…fundamental, systematic mismatches between…" the two theories (Argyris, 1995, p. 20). This is seemingly the case with Institution A and its commitment to student career development. Despite committing to a number of priorities designed to support students' transition to employment, at the doctoral level the commitment continues to focus primarily on supporting transitions to academic employment. According to Nadler and Tushman's (1980) model, when there is incongruence between the institution's stated commitment and its actions, leaders need to pay attention to the strategy-in-use, considering what purpose it serves.

Throughputs. The work to be done, formal structures, systems, and processes, the informal organization, and people come together to produce the outputs identified in Nadler and Tushman's (1980) model. These throughputs are referred to as the transformation process.

Informal organization. According to Nadler and Tushman (1980), the informal system consists of an institution's culture, norms around how tasks are accomplished, values, beliefs, and management style. Under Bolman and Deal's (2013) four frame model, the symbolic frame captures many of the elements of the informal organization, suggesting that the informal organization is the way in which people make meaning out of the "…chaotic, ambiguous world in which they live" (p. 244).

The university setting is rich with symbols. A key symbol identified by Bolman and Deal (2013) is values, which they suggest "…characterize what an organization stands for, qualities worthy of esteem or commitment" (p. 249). Institution A identifies 16 distinct values that it says describes "…the culture that all members of our campus community will aspire to embrace and uphold" (Institution A, 2014a). Among the values identified are diversity, excellence, partnership, and openness. Bolman and Deal (2013) suggest the most important values are not those codified in a mission statement, rather, it is the values that an organization lives that matter most.

The institution's value of excellence is especially relevant to the PoP. The value of excellence focuses on national and international recognition for teaching, learning, research and scholarship (Institution A, 2014a). News items celebrating a faculty member's success, receptions honouring outstanding achievements, and departmental e-mails recognizing a student who has secured a tenure-track position regularly acknowledge excellence in teaching, learning, research, and scholarship. This recognition is a key way in which the institution acknowledges success and

validates the work of faculty and staff. For students who seek career opportunities outside of

academia, a gap exists between the stated value of excellence and the narrow categories that

define this value. Examples of students going on to great careers in administration, government,

business, and the non-profit sector, for example, are bountiful, and yet these exemplars of

excellence are rarely acknowledged in the same ways that success within academia are

acknowledged. This lack of recognition is just one way in which the institution demonstrates a

lack of support for PhDs who choose to pursue non-academic careers and reinforces Bolman and

Deal's (2013) assertion that what matters most within organizational culture is what values are

lived, not the ones that are written down.

   Work. Under the congruence model (Nadler & Tushman, 1980), work is the basic tasks that

contribute to achieving the institution's strategy. Within the context of this OIP, a shift in task

orientation will be required in order to close the gap between the current and desired state. The

work of supervisors will need to shift from a purely student-as-apprentice mindset to include

attitudes, conversations, and behaviors that help prepare students for a variety of career

possibilities (Van Wyck, 2017). This shift will include being aware of the diversity of career

aspirations of students, assisting students in identifying their strengths, becoming familiar with

campus career resources, and connecting students with academic and non-academic networks

(Van Wyck, 2017).

   Formal organization. The formal organization is concerned with how an institution

"…structures, coordinates, and manages the work of its people in pursuit of strategic objectives"

(Nadler & Tushman, 1999, p. 47). As discussed in Chapter One, the formal structure of graduate

education at the institution reflects a hierarchical structure in which a vice-provost oversees

graduate education broadly, but operational leadership falls within individual departments and is overseen by department chairs.

The teaching and research functionality that characterizes graduate education focuses students' attention clearly on academic career paths and is guided by the supervisory relationship. To shift from the assumption that students only need preparation for academic careers to one in which students prepare for a diversity of paths requires a more integrated model. To accomplish a more integrated system, an examination of the system as a whole is necessary. For example, current doctoral study policies associated with funding, comprehensive exams, research, and thesis defense all create barriers that prevent students from engaging in career development activities. Institutional leaders and influencers, like leaders in the graduate school and associate deans are the starting point for making changes to the formal organization and for shifting the nature of work done within departments.

People. In considering a change initiative, leaders need to be aware of the impact of the change on stakeholders, as well as understand organizational players that can help facilitate the change (Cawsey et al., 2016). In the context of this OIP, the change will affect key stakeholders including graduate chairs and supervisors. The change initiative requires a shift in their attitude, skills, and knowledge, and they will need guidance in understanding how their roles align with the new direction. It will be important to consider their fear of the unknown (i.e., many are unaccustomed to helping students with non-academic career preparation), as well as feelings associated with being asked to do more. In both instances, underscoring their role as being supports and a referral system, while leaving the heavy lifting to campus career professionals, will be important.

Outputs. Nadler and Tushman (1980) define outputs as the services an institution provides in order to meet mission-related goals. Further, outputs can also include satisfaction of institutional members and customers, as well as growth and development of institutional members. In the congruence model, system, unit, and individual outputs are defined and measured and contribute to an ongoing assessment of the success of a change initiative (Nadler & Tushman, 1980).

At the system level (i.e., the institutional level), outputs are related to incremental shifts in how the doctorate is seen as preparation for diverse career pathways. Changes to the structure of doctoral programs, whereby increasing numbers of programs allow students to substitute a comprehensive exam for an internship, is one example of a system level change.

At the unit level, increased enrolment and retention within specific doctoral programs is an example of measurable outputs. As the institution increases its career supports for *all* students, not just those pursuing academic careers, it will differentiate itself from its competitors. Prospective students will understand not only the variety of career paths of the institution's graduates, but will also understand the unique ways in which the institution supports and nurtures its students' career interests.

At the individual level, students must feel supported in preparing for careers inside and outside the academy. This includes opportunities to participate in career preparation activities and to engage in safe and open dialogue with their supervisors about their non-academic career aspirations. At a supervisory level, doctoral supervisors accept that preparing for only an academic career or only a non-academic career is a false choice, and that allowing students to prepare for both does not detract from their research agenda (Allen, 2013). Further, supervisors feel adequately prepared to refer their students to on-campus supports for career conversations that they are unable to have.

Possible Solutions to Address POP

A number of approaches can address the issue of preparing students for post-doctoral careers within academia and without. Three preliminary solutions to the problem are considered. Within this section, each solution is interrogated, taking into account resource needs, possible benefits and consequences to implementing the solution, and the sustainability of each solution.

Maintaining the Status Quo

The first possible solution to the PoP is to do nothing and maintain the status quo. While this solution may seem in opposition to an improvement process, it is important to note that several scholars oppose doctoral education reform, especially reform driven by career-related concerns. Opposition to reforming doctoral education takes several forms. First, it is rooted in the relatively low unemployment rates amongst doctoral degree holders (Edge & Munro, 2015; Maldonado et al., 2013). Further, opponents site concern over the "dilution of the standing of the PhD" (Usher, 2002, p. 151), and questions around the purpose of universities when it comes to having a vocational intent and the production of viable employees (Kendall, 2002; McCowan, 2015) as reasons to oppose changes to the doctorate.

Statistics that suggest that doctoral degree holders fare well in the labour market partly support the argument to maintain the status quo and the perspective that the PhD is solely preparation for an academic career. Despite headlines that suggest jobs are scarce for doctoral degree holders, new research conducted by HEQCO suggests that one third of PhDs from Ontario universities are able to secure tenure-track positions (Chiose, 2016). Further, census and other data show that PhDs in the Canadian labour market experience the lowest rates of unemployment (Maldonado et al., 2013) overall. Seemingly, the data suggests that the current approach taken in doctoral studies adequately prepares students for employment both inside and

outside the academy, and consequently no changes are required. However, while students eventually fare well in the labour market, their transition into the non-academic market is often challenging, and graduates and employers alike indicate that more needs to be done to illuminate diverse opportunities and to adequately prepare for them (Maldonado et al., 2013).

Maintaining the status quo is an attractive option for those within academe who argue that any energy given to preparing students for careers other than research positions or the professoriate contradicts the very purpose of research-intensive doctoral education. The traditional PhD "orients research into narrow disciplinary channels and encourages a lone, 'ivory tower' way of working" (Usher, 2002, p. 150). Any activity that detracts focus from this approach, in particular approaches which engage students to prepare for different ways of working or careers outside of academia, is seen as neither educationally appropriate within the university context nor doctoral in nature, and represents a fundamental shift in the purpose of the PhD (Usher, 2002).

Maintaining the status quo also satisfies those who define the purpose of universities in terms of knowledge acquisition and production rather than as a vocational institution preoccupied with graduate employability. Historically, universities have been seen as institutions of teaching, learning, and research and, as such, are sites for producing, discovering, and developing knowledge (McCowan, 2015). According to Collini (2012), the "governing purpose [of universities] involves extending human understanding through open-ended inquiry" (p. 92). Those who subscribe to the historical definition of a university's purpose believe that learning will naturally lead to societally beneficial outcomes, like citizenship, but also employability, and consequently are not supportive of giving energy to approaches that explicitly prepare students for employment (McCowan, 2015).

Continuing to approach doctoral education as solely preparation for an academic career and not helping to prepare students for more diverse careers is no longer an option for Institution A. While it is the most affordable of possible approaches to the problem, and comes with the least amount of institutional resistance, it does not address the expressed need (Sekuler et al., 2013; Wood, 2017) to help prepare students for the careers in which they will eventually find themselves.

Train-the-Trainer

A second potential solution to this problem of practice is a train-the-trainer approach. Feedback from doctoral student supervisors who are open to helping prepare their students for careers inside and outside academia suggests that one barrier to support is their lack of knowledge of careers outside academia (Edge & Munro, 2015; Maldonado et al., 2013; Sekuler et al., 2013). This lack of knowledge can be attributed to a number of factors including a supervisor's own experiences of a linear career path from PhD to academia, limited connections with networks outside of academia, and lost connections with former PhDs who entered the non-academic labour market (Edge & Munro, 2015). If one assumes that supervisors' discomfort with preparing students for alternative careers is less about negative attitudes towards those sorts of aspirations (Edge & Munro, 2015) and rather is attributable to a lack of overall understanding, then a possible remedy is to equip supervisors with the knowledge they need to be more comfortable.

According to the Society for Research on Educational Effectiveness, train-the-trainer translates to "…initially training a person or people who, in turn, train other people…" (Bennett, 2017, para. 4), and is widely recognized as an effective strategy for learners (Boud, 2001). In the case of preparing students for careers outside of academia, this approach would involve

professional staff educating faculty about the non-academic labour market, job search strategies, and the many resources students can draw on in their career preparation. A train-the-trainer model can help increase supervisors' knowledge and comfort, and ensure that all students receive consistent messaging.

There are several benefits to a train-the-trainer model, allowing for positive outcomes for students and in cultivating a new orientation around non-academic careers. First, when supervisors (and other student-associated academics) are comfortable and knowledgeable about the topic, they will be more open to conversations about diverse career options. Normalizing interests in careers outside of academia and supporting students in this exploration addresses a major criticism that students have of the supervisory model, and suggests a level of understanding amongst supervisors that is currently lacking. Further, the pervasive nature of how the academe is oriented against career sectors that fall outside the university environment is problematic and education and participation can address this deficiency.

A second benefit of a train-the-trainer model is that it helps to reduce costs and build capacity. Under the current model at Institution A, non-academic career preparation is most often the purview of, and relegated to, the campus's career centre, which provides service and programming to approximately 30,000 students, alumni, and post-doctoral fellows. Current staffing models prevent the career centre from providing substantive support to all students, and anecdotally doctoral students are often reluctant to access the services, seeing them as primarily directed to undergraduates. Assisting supervisors in increasing their knowledge of non-academic career preparation helps to ensure that students receive the information that they need, from a source that they prefer to receive it from, while at the same time reducing the strain on the career centre. As deeper commitments among faculty towards these types of initiatives are achieved,

the less the need to invest resources in increasing career staff and the more time that career staff can devote to additional service and program provision.

While a train-the-trainer model has several advantages, including cost-efficiency and sustainability, several disadvantages exclude it as a viable solution to the problem. Due to the diversity of academic disciplines and career interests amongst students, training could only address the most generic career preparation information and not fully account for industry-oriented and individual interests. Questions and concerns about career preparation and planning are often much deeper and require more detail than what general knowledge can provide through a train-the-trainer model. Further, key challenges faculty have in advising students interested in careers outside of academia revolve around the lack of strength of networks in sectors other than their own (Sekuler et al., 2013). While a train-the-trainer model can underscore the importance of networking in the career preparation process, the model itself cannot increase the size of the supervisor's network. For these reasons, this solution is not a feasible one in helping to resolve the problem.

Integrated PhD

A third solution, and the one that underpins this OIP, is the introduction of an integrated program, in which career preparation for PhD students occurs in parallel with their academic studies. As stated earlier, under the current model of doctoral studies, the majority of career development resources at universities, including Institution A, are intended to prepare PhDs for academic careers (St. Clair et al., 2017). This approach reinforces existing coaching and mentoring practices that are oriented towards academic pathways, and consequently leaves those students who are not pursuing an academic career on their own to identify resources that support their career aspirations (Sekuler et al., 2013). Given the employability gap for those entering into

the academic job market, there is a substantial group of students underserved. There is a clear

institutional role and obligation in addressing the career preparation needs of all students

regardless of career path. Developing programming that integrates and supports learning about

career engagement content alongside discipline specific subject matter is the best approach to

support students in their academic and non-academic career pursuits. Applying a model of

improvement grounded in a plan-do-study-act cycle will help to ensure that the selected solution

to the problem of practice meets its intended outcomes. Appendix D summarizes the three

possible solutions.

Plan-Do-Study-Act Cycle

When undertaking a change initiative, it is important to engage in an ongoing process of

assessment and evaluation. Langley et al. (2009) posit a model for improvement that combines a

plan-do-study-act (PDSA) cycle with responses to three fundamental questions. According to

Langley et al. (2009), the answers to the three questions coupled with the PDSA cycle form an

effective model for planning, implementing, and evaluating a change initiative (Langley et al.,

2009). Figure 2.4 illustrates this improvement model.

In response to the model's three fundamental questions, this OIP aims to shift the focus of

career preparation undertaken at Institution A from one that primarily focuses on academic

careers to one that acknowledges the diverse career paths of students and prepares them

accordingly. The introduction of a mandatory transitional competency and career engagement

program will result in an improvement in how students are prepared for entry into a variety of

careers. Students' experiences as reported through self-assessment measures and evaluations of

modules, as well as in how they report feeling adequately prepared to transition into both

academic and non-academic career paths, will help assess the change initiative's impact. Further,

data collected by the graduate school that tracks the reduction in the number of students who exit

PhD programs because of dissatisfaction in the lack of supports provided for their non-academic

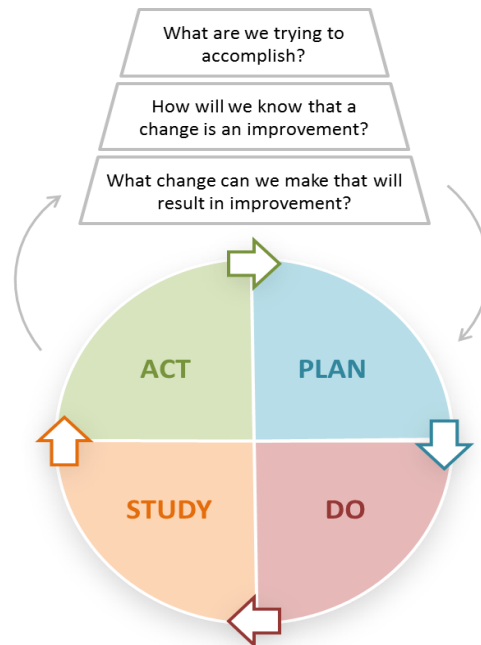career pursuits will demonstrate the program's success.

Figure 2.4. Plan-do-study-act improvement cycle. Adapted from "*The improvement guide: A practical approach to enhancing organizational performance (2nd ed.),*" by G.J. Langley, R.D. Moen, K.M. Nolan, T.W. Nolan, C.L. Norman, and L.P. Provost, 2009, p. 98.

As illustrated in Appendix B, the proposed program will focus on the development of six key

competencies identified by Institution A as critical for the personal and professional success of

its students. Beginning with students' self-assessment of their proficiency in each of the six

competencies, the program is structured from a development perspective, whereby mandatory

and elective modules will be offered to students based on where they are in their studies (i.e.,

year one, year two, year three, or year four). In each year of their four years of doctoral studies,

students will be required to complete a prescribed number of hours of mandatory and elective

programming, which they will select based on their self-assessment results. The specifics of the

PDSA cycle are considered in more detail in Chapter Three.

Leadership Approaches to Change

One of the leadership frameworks that informs the leadership and implementation of change in this OIP is the adaptive leadership framework. Adaptive leadership, championed by Heifetz and colleagues (Heifetz, 1994; Heifetz, Grashow, & Linsky, 2009), focuses on how leaders encourage others to adapt to problems, challenges, and changing environments (Northouse, 2016). In addition to Heifetz and his colleagues, several authors (Glover, Friedman, & Jones, 2002; Glover, Rainwater, Jones, & Friedman, 2002; Randall & Coakley, 2007; Yukl & Mahsud, 2010) have formulated adaptive leadership theories that focus on leadership behaviours rather than the leader's personal characteristics.

Model of Adaptive Leadership

Heifetz et al. (2009) define adaptive leadership as the "…practice of mobilizing people to tackle tough challenges and thrive" (p.14). Glover, Freidman, and Jones (2002) echo this definition, stating that Heifetz's model provides a framework for leaders in deciding when and how to mobilize people. The role of an adaptive leader is to prepare and encourage people to deal with change in response to their changing environments (Heifetz, 1994; Yukl & Mahsud, 2010). Consequently, the focus is on the leader's activities in relation to the work of followers and in specific contexts. In this way, adaptive leadership is a follower-centric theory, rather than a leader-centric approach (Northouse, 2016). It focuses on how leaders support followers in adapting to challenges and how leaders help people to change and adjust to new circumstances (Northouse, 2016).

There are three main components of Heifetz's (1994) model, as illustrated in Figure 2.5. The first component is situational challenges, which considers the origins of a problem and prescribes an approach to resolving it. The second component of the model consists of six leader behaviours

that play an essential role in the adaptive leadership process. The third element is adaptive work, which is the goal of adaptive leadership. It refers to the communication process between leaders and followers, but has a primary emphasis on the work undertaken by followers.

Figure 2.5. Three main components of Heifetz's Model of Adaptive Leadership. Adapted from *"Leadership: Theory and practice (7ᵗʰ ed.),"* by P.G. Northouse, 2016, p. 261.

   Situational challenges. The left side of Heifetz's (1994) model suggests that leaders address three types of situational challenges. According to Heifetz, technical challenges are clearly defined problems with known solutions implemented based on existing rules and procedures. With technical challenges, followers depend on the expertise and authority of leaders to solve problems. For challenges that have both a technical and an adaptive element, Heifetz (1994) suggests that the challenge is clear, but straightforward solutions under existing organizational systems are missing. There is a shared responsibility for resolving this challenge, with leaders helping to define the challenge, suggest solutions, and provide support and resources. Followers have to acknowledge the problem enough to want to change. An adaptive challenge is a problem that is not clear-cut or easy to identify (Heifetz, 1994). A leader's authority or expertise will not

resolve an adaptive challenge, nor will the normal process of doing things. Under these

circumstances, the "…situation calls for leadership that induces learning…" (Heifetz, 1994, p.

75), even when the leader does not have a solution. Adaptive challenges require learning to both

define the problem and implement solutions (Heifetz, 1994). Successful resolution results in

changes in followers' assumptions, perceptions, beliefs, attitudes, and behaviours.

   Leader behaviours. The second component of Heifetz's (1994) model is concerned with

leader behaviours. Heifetz identifies six behaviours that are general prescriptions for leaders

when assisting others to confront difficult challenges and the resulting changes. According to

Heifetz, the first behaviour, referred to as get on the balcony, is a prerequisite for the other

behaviours. A metaphor, this behaviour relates to the leader's need to gain perspective and see

the big picture. Getting on the balcony helps a leader diagnose the systemic or structural issues

of a problem from a distance (Heifetz et al., 2009). In the context of this OIP, this dimension of

the model is critical. On the surface, the resolution to the problem of practice appears

straightforward. Supervisors simply need to stop being contrary and support their students'

diverse career aspirations. Heifetz's (1994) model compels leaders to see beyond the surface and

their own perspective and to understand that the problem is far more complex than the perceived

inflexibility of supervisors. Getting on the balcony helps leaders understand the beliefs and

values of supervisors, of the organization, and of graduate students. It helps to see each

stakeholder's perspective on the problem and understand that it may have less to do with their

personality than with their unique way of understanding the world and their work.

   The second adaptive leadership behaviour posited by Heifetz (1994) is identifying the

adaptive challenge. Heifetz notes that not all challenges are adaptive; it is important that

leadership responses are appropriate to the challenge. Randall and Coakley (2007) illustrate

Heifetz's point through two case analyses. In one case, a leader assessed the challenges as technical when they were, in fact, adaptive, and ultimately the change initiative failed, and the college in question closed (Randall & Coakley, 2007). In the second case, the leader accurately assessed the challenge as adaptive. The outcomes of the change initiative in this instance showed how adaptive leadership dimensions could successfully result in a sustainable organizational change initiative in a university setting (Randall & Coakley, 2007).

Adaptive challenges consist of "…a gap between the shared values people hold and the reality of their lives, or of a conflict among people in a community over values or strategy" (Heifetz, 1994, p. 254). Adaptive challenges also require people to learn new ways of coping. Heifetz et al. (2009) describe four basic patterns of adaptive change, including a gap between espoused values and behaviour and competing commitments, both of which are relevant to the problem of practice explored in this OIP. The gap between espoused values and behaviour occurs when an organization claims to adhere to values not supported by their actions. For example, Institution A articulates support for preparing graduates for success within and beyond academia, including helping them to articulate their knowledge and skills (Institution A, 2014a). In practice, doctoral studies continue to be thought of as preparation for academic careers and little is undertaken to support students' career pursuits outside of academia (Kendall, 2002). Competing commitments occur when an organization has many commitments, some of which come into conflict with each other. The mission of Institution A focuses on excellence in teaching, research, and scholarship (Institution A, 2014a), and PhD students are a critical element in helping achieve the mission. Consequently, the institution's focus is on producing students who excel in these fields, to the exclusion of support for participation in other activities that may assist them in preparation for careers different from those in the professoriate. At the same time, the institution has committed

to supporting the career development of students for diverse careers (Institution A, 2014a; Ontario Universities Council on Quality Assurance, 2015).

The third leadership behaviour in the model is the need for leaders to regulate the distress that adaptive challenges generate (Heifetz, 1994). Heifetz notes that when faced with adaptive challenges, distress ensues. The leader's challenge is to help contain the distress lest it becomes overwhelming and counter-productive. A leader can achieve distress regulation by using formal and informal power and influence to strategically frame the issue, develop structures and processes, and maintain norms that should continue (Heifetz, 1994).

Maintaining disciplined attention is the fourth leadership behaviour identified by Heifetz (1994). Heifetz says that in the face of the disequilibrium that an adaptive challenge produces, the natural tendency is to apply current problem-solving methods. When those fail, individuals will employ work avoidance mechanisms to reduce their stress and to divert attention from the real problem. Questions around who owns the problem and the tendency to scapegoat or blame others for the lack of support that students experience concerning their non-academic career interests is an example of work avoidance related to the problem of practice. Under an adaptive leadership model, attention needs to shift from work avoidance to focusing on the implications (e.g., ability to recruit students with diverse interests, ability to retain students, the health of graduate programs) of not helping students feel prepared for their future careers.

The fifth behaviour in the model is giving the work back to the people (Heifetz, 1994). An organization's failure to adapt can happen when individuals rely too much on leaders to meet challenges rather than on adapting their approach. Leaders need to empower followers to decide what to do when they feel uncertain, express belief in followers' ability to resolve their own problems, and encourage them to think for themselves.

Finally, the last leadership behaviour is to protect leadership voices from below (Heifetz, 1994). This behaviour requires leaders to listen to people who are on the margins, even voices considered deviant within the group, and give them a voice.

Adaptive work. The third component of the model is adaptive work, which is the focus and intended goal of adaptive leadership (Heifetz, 1994). According to Heifetz, it takes place in a holding environment, which is a space where people can address the adaptive challenges facing them. The proposed process for initiating a change at Institution A, such that students prepare for diverse careers, is reflective of adaptive work. Not only is the challenge adaptive, but it also provides an opportunity for the use of all six leadership behaviours. It invites the voices of diverse stakeholders into the conversation, including those on the fringe, and creates a safe holding environment to be honest about what is at stake in addressing the problem of practice. Ultimately, the intended result is the shifting of values and behaviours such that students feel prepared both practically and emotionally for careers inside and outside academia.

The adaptive leadership model developed by Heifetz (1994) and his colleagues (Heifetz et al., 2009) is one approach that will be applied to leading and implementing the proposed change. The model's attention to the role that the external environment plays in driving the need for the change, the role that stakeholders' values, beliefs, and norms play in the success of a change initiative, and the role that interventions play in enacting sustainable organizational change, are all highly relevant to the problem and practice and fit well with this OIP.

Leadership Ethics and Organizational Change

According to Northouse (2016), ethics is central to leadership because of the nature of the process of influence, the need to engage followers in accomplishing mutual goals, and the impact leaders have on the organization's values. In initiating and implementing change initiatives,

leaders are constantly faced with ethical issues and their decisions are informed and directed by their ethics (Northouse, 2016).

In my case, my position as a psychotherapist prior to my current leadership role shaped my ethical compass and translated to the ethics that guide my leadership. As a former member of the College of Registered Psychotherapists of Ontario (CRPO), three ethical principles are central to my ethical leadership practice. First, the CRPO's code of ethics required me to uphold excellence in my professional practice, which included working in the best interests of clients. The second ethical principle of the CRPO that informs my leadership is integrity. Amongst elements of this principle, clients' options are to be transparent. The third CRPO principle that informs my leadership practice is to support justice and fairness in my professional work, and stand against oppression and discrimination.

In the context of this OIP, my ethics have shaped my view of the institution's responsibility to act in a student-centred, principled, and transparent way in addressing the problem of preparing students for diverse careers. Working in the best interests of students requires the institution to see others not just as a means to an end, but rather as ends in themselves (Beauchamp & Bowie, 1988; Northouse, 2016). The current state of student career preparation, in which students largely act as apprentices to the benefit of the institution's research and teaching agenda regardless of their own career interests, challenges this particular ethical principle. Adherence to this ethical principle requires a shift in practice whereby the institution "…nurtures followers [students] in becoming aware of their own needs, values, and purposes…" (Northouse, 2016, p. 342). Supervisors, in particular, will need to adjust their mindset to one that sees their students as "…having their own autonomously established goals…" (Beauchamp & Bowie, 1988, p.37) and not treat them as a means to their own personal research and professional goals. The proposed

introduction of institution-wide programming that supports students in preparation for a variety of careers represents a commitment to respecting the unique needs and interests of students, and a major piece of the change initiative is to compel supervisors to support it.

Northouse (2016) identifies manifesting honesty as an ethical leadership principle, which is akin to the integrity principle outlined by the CRPO (2011). Northouse argues that honesty is more than truth telling. Rather it includes openness and completely representing reality. One of the arguments in the debate about the institution's responsibility to help students prepare for diverse careers focuses on the transparency of career information for students. Some argue that universities need to be more honest with prospective students, especially those aspiring to the professoriate, about employment prospects and career pathways (Flaherty, 2017; Pannapacker, 2013). While the proposed OIP does not address the pre-admission stage, it will provide admitted students with timely and realistic information about the variety of career prospects available to doctoral degree holders. In this way, the institution will act with integrity and ensure transparency when it comes to career pathways.

Both the CRPO (2011) ethical guidelines and Northouse's (2016) ethical leadership practices identify the importance of leaders supporting fairness and justice. In the current state, students who are not interested in an academic career report real or perceived differential treatment than those who stay the academic career course (Sekuler et al., 2013). Examples of unfair treatment include being moved to less important research projects or being seen as lacking dedication and commitment (Sekuler et al., 2013). Further, the current model of graduate student career and professional development at Institution A is inconsistent (Leckie, 2014). Leckie's (2014) exploration of graduate program practices demonstrates how students' access to discipline-specific career development sessions and support is unequal, creating an imbalance in how

students across disciplines are exposed to career programming. The proposed program will level the playing field, ensuring that all students receive equal access to career preparation material regardless of academic discipline.

The current state of graduate education at Institution A serves the interests of the institution and supervisors to a great extent, as well as students who express a singular interest in an academic career path. The current focus challenges my own ethical principles including acting in the best interests of *all* students, institutional integrity, and fairness. The future state, through the implementation of this OIP, places students' interests and goals at the forefront by preparing them equally for traditional and non-traditional careers for PhDs, and align with the ethical practices that I apply to my own leadership practice.

Chapter Summary

Chapter Two posits two change models, Kotter's Eight-Stage Model and Duck's Five-Stage Change Curve, as frameworks for leading the change process. Further, the question of what needs to change in order for this OIP to be successful is explored through Nadler and Tushman's organizational congruence model. An adaptive leadership model guides the process of leading and implementing change, and ethical considerations are considered. Chapter Three focuses on the implementation, evaluation, and communication plan for this OIP.

Chapter Three: Implementation, Evaluation, and Communication

Building on the organizational analysis from Chapter Two, this chapter explores the

operational elements of the OIP including the change implementation plan, communicating the

plan, monitoring, and evaluation. The chapter concludes with considerations for possible next

steps.

Change Implementation Plan

The defining feature of the implementation phase of a change initiative is the shift from

planning to doing. Duck (2001) refers to the implementation stage as "Time for action!" (p. 151),

suggesting that now people need to do more acting and participating, compared to the listening

and questioning that characterized the preparation phase. The implementation phase typically

begins once the plan has been fleshed out and action steps are clear enough to assign to various

stakeholders (Duck, 2001).

Goals and Priorities

This OIP explores the issue of student preparation for careers inside and outside academia.

Currently, the institutional culture is not one that will readily accept a fully embedded career

development program into the PhD, though there does appear to be a growing appetite to address

the issue from a co-curricular approach. Consequently, the initial change plan will result in the

development of a centrally coordinated transitional competency and career engagement program,

the core of which is the development of competencies relevant to career preparation. The goals

of the program are threefold:

- explicitly articulate the key learning outcomes that arise from doctoral studies that extend
  beyond discipline-specific curriculum;

- facilitate self-directed professional development learning; and

- support engagement in maximizing the value and applicability of the PhD for career preparation and development (Institution A, 2017c).

Duck (2001) provides a number of options for kick starting the implementation phase. One option, referred to as "test, then deploy" (p. 154), employs a pilot approach before instituting a change across the entire organization. This approach will be applied in the first cycle of the change process, whereby the proposed new program will be rolled out as an optional pilot to a small group (i.e., up to 100) of students. The priority in the first iteration of the change cycle is to introduce the program, deliver select modules to a small number of students who self-select to participate, and monitor and evaluate the individual modules and program concept as a whole.

Assumptions

There are two key assumptions that underlie the change implementation plan. The first assumption is that students will see the value in the program and report positive outcomes as a result of participation. The second assumption is that the coalition can secure the level of faculty buy-in necessary for the program to succeed.

The adage 'If you build it, they will come' is based on the assumption that simply by making something available to people, they will avail themselves of it. In the case of the proposed program, statistical data about the career outcomes of students, employer feedback of students' preparedness for non-academic careers, and information from students suggests that students will see the value in a coordinated career engagement program. However, despite the statistics, the majority of PhDs are still motivated by a career in the professoriate (Desjardins, 2012; Edge & Munro, 2015), and may not be inclined to accept mandatory programming that draws their attention away from preparing for an academic career. One way to mitigate against this is to position the program and the competencies gained through participation as transferrable to both academic and non-academic careers.

The second assumption, that faculty may not buy-in to the level required for the program to be a success, stems from the traditional purpose of the doctorate and the contributions that students make to the academy. While some faculty see the value in preparing students for a variety of career outcomes, many do not see employability as the purview of a university, and particularly at the doctoral level (Harvey, 2000). Students play a critical role in the teaching and research mission of the institution, and anything that detracts from this focus is generally not supported. Supervisors have a vested interest in their students' success as measured by time to completion, publications, conference presentations, and meeting other research-related milestones. Professional development for non-academic careers is seen as an unwanted and unnecessary distraction, and consequently may not be supported. To mitigate this, one approach is to use external and internal data to illustrate career outcomes of students, as well as to share information that shows that students are already engaging in these types of activities without negative consequences to their research and teaching responsibilities.

Managing the Transition

Change team. Kotter (1996) argues that change initiatives led by a guiding coalition, comprised of the right individuals, a high degree of trust, and a common goal, is essential to the success of the plan. A steering committee, comprised of key representatives from stakeholder groups across the institution, will lead the change initiative proposed in this OIP. Committee composition will include leaders from academic and service units that will play a key role in championing the plan and developing or delivering content, select staff members who will develop and deliver programming, and student representatives. Members of the change team already have existing roles within the institution, and each represent areas or stakeholder groups

that have a stake in supporting the career engagement needs of students. Committee members have worked together on other initiatives, collaborate well, and trust each other's intentions.

At the time of implementation, an overall Program Coordinator will support the work. The Program Coordinator will join the steering committee and contribute to the monitoring and evaluation of the pilot. The role will also assume responsibility for the operational tasks associated with the pilot program, including recruiting participants, monitoring enrolment, promoting the program, liaising with content developers, scheduling modules, and surveying participants at the conclusion of each module, amongst other tasks. This role represents a new resource need; the resources section of this chapter discusses the financial implications of the new role.

An informal network of institutional partners will also support the work of the steering committee. Duck (2001) identifies three types of networks that leaders should be familiar with: Cassandras, Networkers, and Influencers. Cassandras are middle managers who are most familiar with what is happening 'on the ground' (Duck, 2001). At Institution A, and in the context of the OIP, the Associate Director of the career counselling team is an example of a Cassandra. The career counselling team will be developing and delivering a number of modules in the program. The Associate Director is uniquely positioned to inform the unit's leader, who sits on the steering committee, how the overall plan is being received by the career counselling team, whose work will be impacted by the introduction of the proposed plan. While not a member of the guiding coalition, Cassandras have their fingers on the pulse of how the plan may be received and provide early impressions to the leaders (Duck, 2001).

Networkers tend to be well known amongst different groups and move easily in and out of them (Duck, 2001). Networkers, because of the nature of their interactions across the institution,

can help the steering committee identify which academic units or specific faculty members can

be leveraged to help champion the change plan and which ones need more attention (Duck,

2001). Because of their daily interactions with faculty, staff from the institution's graduate

school and teaching support centre understand the attitudes and interpretations of the change

initiative are and to share their overall impressions with the steering committee.

Influencers are individuals who can adjust or change the attitudes and opinions of others

(Duck, 2001). At Institution A, department chairs have the capacity to exert influence over

others, especially with faculty in their department. If the steering committee is able to satisfy

department chairs with the change plan, they will help in the change efforts and influence others

to do the same. Consultation with department chairs will occur as the committee works through

the development of the change plan.

Required resources. In the first cycle of the change plan, the primary resource that will be

needed is the time commitment of the various stakeholders. The plan itself (i.e., the introduction

of a mandatory transitional competency and career engagement program for doctoral students)

can be implemented, at least initially, at a low financial cost. Elements of the program already

exist on campus, but are delivered in an ad hoc and elective fashion, so the proposed plan is not

necessarily about developing new programming. Rather, the focus is largely on pulling existing

programming together under a single, mandatory umbrella. One financial cost associated with

the initial cycle is the staffing cost of a part-time contract Program Coordinator.

To realize longer term goals of the program, additional financial resources will be required.

The existing part-time contract Program Coordinator role needs to be a permanent full-time

position. Similarly, for the career engagement modules, the ultimate goal is the creation of a

dedicated graduate student career counsellor, who will oversee the career engagement modules

including ongoing assessment and re-development. Additionally, this new role will become the primary career counsellor for all students enrolled in a doctoral program. From a programming perspective, the pilot will use free career assessments in the first cycle of the program. In future iterations, the preference is to use different career assessments, which come with a financial cost. Finally, one element of the career engagement modules is to provide opportunities for students to engage with employers through networking events, all of which have a financial cost associated with them. An annual budget increase of approximately $225, 000 will help to sustain these elements of the program.

Potential implementation issues. There are a number of issues, some practical and others more complex that may arise as the plan moves from conception to reality. Five potential issues have been identified in the implementation phase of the first iteration of the OIP. The first potential issue results from the elective nature of the pilot program. In the pilot phase, students will self-select to participate, and there are no consequences for not attending. As is the case with student programming in general, one can anticipate a challenge between registrations in modules versus actual attendance. Commitment from students is often strong at the time of initial registration and wanes between registration and the actual date of the module, as other priorities take over. One way to mitigate this challenge is to be flexible with module scheduling, offering multiple sessions of the same topic on different days and at different times of the day. Once the full program is implemented and it moves from optional participation to mandatory participation, less attrition between registration and attendance is expected, although the importance of being flexible in scheduling will remain a priority.

The second issue that may arise concerns space. Finding space to host programming is an ongoing challenge at Institution A. Finding space is further complicated as the plan moves from

the first change cycle, in which participation is optional, to the second change cycle in which

participation becomes mandatory. The pilot program will accommodate up to 100 participants,

which will need to be scaled to accommodate up to 400 new students each fall once the program

reaches full implementation, in addition to continuing to run years two, three, and four of the

program. Two considerations will help address this issue. One is that the steering committee will

need to consider the use of technology for certain elements of program delivery such that

physical space will not be needed. The second way to address the issue is to develop

programming activities for use with large groups rather than small groups. This will reduce the

number of times that space will need to be found.

   The number of students that need to be accommodated through the program on an annual

basis creates a third potential problem. Current staffing levels in service units are already at

capacity and program development and delivery is an add-on to existing responsibilities. For the

management of the career engagement modules specifically, one way to address this problem is

to submit a budget ask to secure funding to support an additional role to develop and deliver

content. Alternatively, the leader of the unit can re-organize the existing career counselling team

and its responsibilities and dedicate one counsellor solely to this program. In the absence of

increased funding from the institution or a re-organization of existing responsibilities, a final

option is to train graduate student volunteers to support program delivery.

   Two final implementation issues are specifically related to the steering committee and the

ongoing work that it will need to do to ensure forward motion and success. Both issues are

related to the importance of communication. First, as the project rolls out, the steering committee

will need to be intentional in communicating with each other to ensure consistent messaging to

audiences outside of the committee, as well as to content developers. As the content for the

modules will not necessarily be developed by members of the steering committee, good

communication will help to clarify expectations, ensure the modules are well developed, and that

there is minimal overlap in content between modules. This will be accomplished by maintaining

regular committee meetings, as well as setting aside extended time to do curriculum mapping.

The steering committee needs to also prioritize communication as the program moves into

implementation because ongoing resistance is anticipated. Faculty adoption of the plan, in

particular, is anticipated to be an ongoing issue that may impact implementation; if students feel

like they lack supervisory support to participate, that may also translate to resistance from the

student body. This can be mitigated by ongoing communication through face-to-face meetings,

where faculty can voice their concerns and have them addressed, even as the pilot is underway.

   Building momentum. As momentum builds from the preparation phase to the

implementation phase, the steering committee will be concerned with identifying short-,

medium-, and long-term goals. In the short-term, the focus will be on identifying the modules

associated with each competency, and assigning required versus elective status. Curriculum for

each module that will be offered in year one of the pilot program will be developed and

consultations with departments will continue to further on-board administrators and faculty. In

the mid-term, the development and implementation of a communications plan will assist with the

recruitment of registrants for the pilot program. In the fall of the pilot year, the program will

launch and modules will be evaluated through survey feedback of participants. Departmental

consultations will continue as more faculty need to buy-in to supporting the program and their

students' participation. The steering committee will also come together for a retreat to undertake

a preliminary assessment of the pilot program, address what did and did not work, and make

adjustments for the next cycle. In the long-term, year one modules will be revised and incoming

doctoral students will be required to enroll in a pre-determined number of hours of the program.

The steering committee will also seek sustainable funding for the program. Table 3.1

summarizes some of the goals, benchmarks, and key performance indicators for the first cycle of

the change plan.

Table 3.1

Short-, Medium-, and Long-term Goals of Change Plan

Range	Benchmarks (Responsibility)	Key Performance Indicators
Short-term	• Identify required and elective year one modules for each competency (steering committee) • Develop curriculum for initial year one pilot programming (program partners) • Department consultations (graduate school)	• # of hours of programming offered • #of staffing hours required to develop content • # of individual and departmental meeting consultations
Mid-term	• Develop and implement communication strategy to recruit pilot program registrants (graduate school) • Pilot initial set of program modules (program partners) • Evaluate modules through survey feedback (graduate school, program Partners) • Ongoing department consultations (graduate school) • Steering Committee retreat • Develop year two program curriculum (program partners)	• #of website hits • #of retweets • #of Facebook likes, shares • # of registrants • # of disciplines represented in registrants • # of 3 (of 5) plus star results on module evaluations • # of individual and departmental meeting consultations
Long-term	• Revise initial modules based on survey feedback and direction of Steering Committee (program partners) • Implement mandatory participation (graduate school) • Submit request for additional funding (graduate school, Steering Committee members' units)	• # of registrants • # of disciplines represented in registrants • Amount of budget allocation

Limitations. Addressing the problem of practice through the introduction of mandatory

career-related programming is not without its limitations. Two will be discussed. One limitation

is associated with the scale of the proposed change, while the second involves the mandatory

nature of the program. The large-scale nature of the change being implemented (i.e., the

proposed change is a campus-wide initiative) is one potential limitation to the proposed change.

A change of this scale will require a great deal of buy-in from stakeholders across the institution, and to achieve that buy-in in a timely manner may pose challenges. This particular challenge will be overcome by starting the program as a pilot with a smaller subset of departments who have already signed on to participate.

A second limitation of the proposal is the mandatory nature of the proposed program. Required participation may be controversial, especially in light of prevailing beliefs about the purpose of the PhD as preparation for academic careers. Inherent in that definition is the contribution that doctoral students make to the teaching and research agendas of the institution; anything that is seen to detract from preparation for an academic career may not be well received. To address this concern, in the short term the program can be marketed as voluntary in nature, so that students can self-select into it and attend sessions on their own time, assuming supervisor approval. Once the program has run successfully and positive outcomes are demonstrated, then it will shift to a mandatory program.

Despite the potential challenges to implementing the proposed changes, there are a number of strengths that ensures Institution A is well positioned to embark on a multi-year change process to address the way in which it prepares students for careers inside and outside the academy.

Strengths. There are three key strengths of the change implementation plan that will assist in its success. First, the plan comes at a time where there is a great deal of focus on doctoral student career outcomes, and in particular their level of preparation for careers outside of academia. Second, while the issue of student career preparation has been on the radar of the career centre for some time, the development of a coalition of units and individuals, including faculty and staff in senior administration, will facilitate the implementation of a concentrated program. Finally,

the fact that the program can be implemented by largely drawing on existing resources is a strength.

As discussed in Chapter One, the academic labour market and the changing interests of doctoral students have shined a light on the career outcomes of doctoral students. The issue has come under greater scrutiny through the proliferation of news items over the last several years, painting the PhD as a degree in crisis. Fullick (2012) writes about "Filling in the gaps? Questions about goals and outcomes of PhD", and in a later article Fullick (2013) asks "Who will hire all the PhDs? Not Canada's universities". Chiose (2013) reports "PhD numbers have doubled but few graduates will find teaching jobs, Ontario study finds", and Iqbal (2012) wrote "In Canada you can get a PhD, but maybe not a job". These headlines provide an ideal backdrop for addressing the issue at Institution A, compelling stakeholders to support the development of a program that helps students feel prepared for diverse careers.

Bolman and Deal (2013) discuss the role of coalitions in organizations and how individuals or interest groups come together to realize a mutually agreed upon outcome. In the case of preparing students for diverse careers, several units on campus, including the graduate school, the graduate student society, the teaching support centre, and the career centre have come together to address the issue. Working collaboratively with other units brings together champions from all corners of the campus, and allows for a collective effort where once there was only a single voice arguing for a solution to the problem.

In a time of restrained and shrinking budgets, financial resources to launch new programs are limited and the process to access funds is highly competitive. The implementation of a program that pulls together mostly existing workshops from a variety of areas under a single umbrella program is more likely to receive institutional support than a plan that requires a significant

financial investment. Launching the program with a relatively small financial footprint is a

strength under the current budget constraints at Institution A.

Monitoring and Evaluating the Change Process

According to Cawsey et al. (2016), the change process unfolds through a series of stages that

include advance planning, implementation, attention to emerging information, and measurement

of change. The monitoring and evaluation of outcomes–prior to, during, and after–the

implementation of a change initiative is often overlooked in the change process, but can yield a

number of benefits. Principal among the benefits of monitoring and evaluation is the ability to

frame the need for change, guide the change, course correct throughout the process, and iterate

the process following an initial change cycle (Cawsey et al., 2016).

Change Cycle Model

The organizational change process implemented in this OIP will be monitored and assessed

using the Plan-Do-Study-Act (PDSA) framework (Langley et al., 2009). As discussed in Chapter

Two, Langley et al. (2009) posit a Model for Improvement, which combines the PDSA cycle

with three fundamental questions. According to Langley et al. (2009), the PDSA cycle helps

leaders develop tests and implement changes through a trial-and-learning methodology, noting

that the steps can be repeated multiple times as part of a never ending cycle of continuous

learning and improvement. For the purposes of this OIP, the PDSA will focus on the first change

cycle, represented by one full calendar year. Figure 3.1 illustrates the four phases of the PDSA

cycle in relation to the two frameworks for leading change (i.e., Kotter's Eight-Stage Model of

Organizational Change and Duck's Five-Stage Change Curve) discussed in Chapter Two. As

Figure 3.1 demonstrates, each stage of Kotter's (1996) and Duck's (2001) models are connected
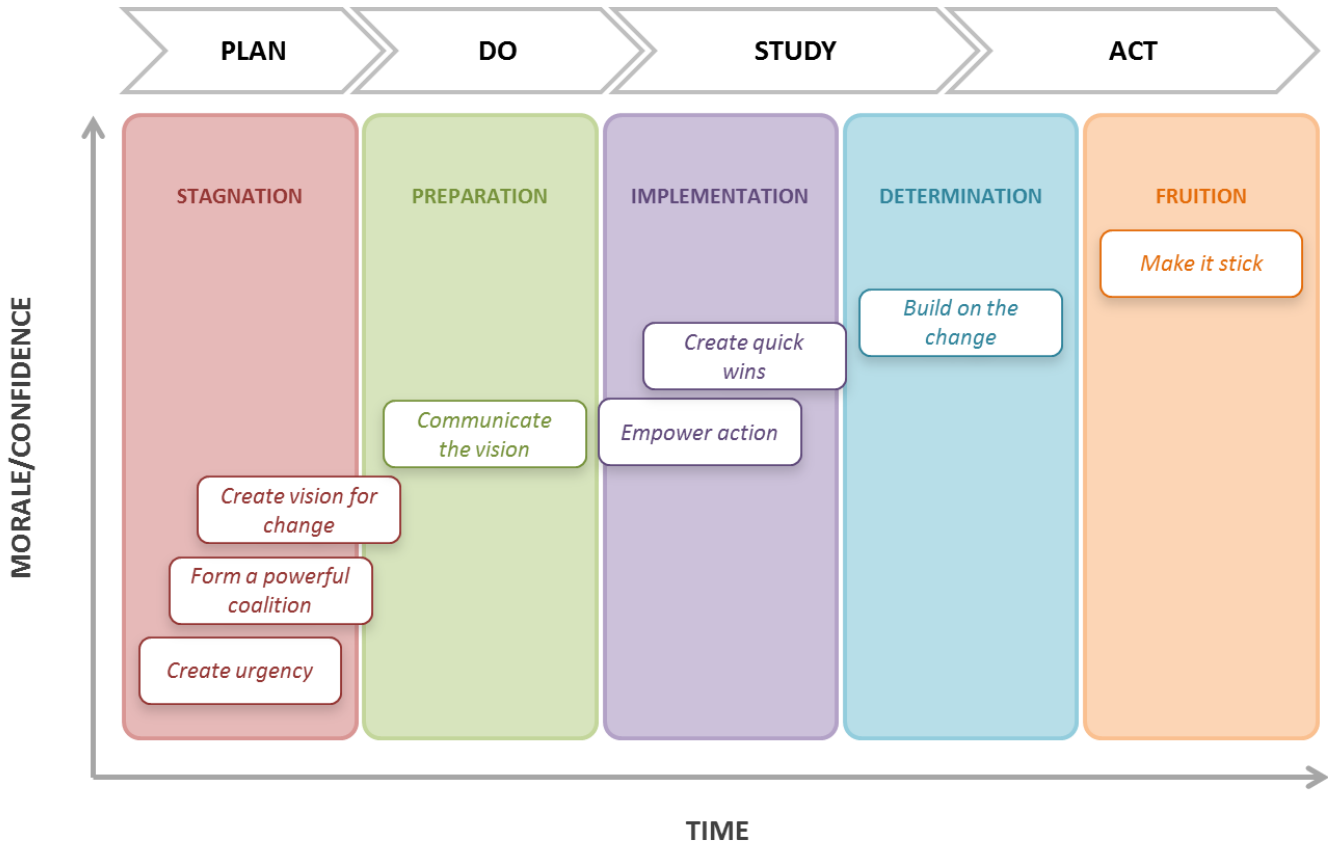
with the four phases of the PDSA model.

Figure 3.1. The OIP change cycle. Adapted from *"The change monster: The human monsters that fuel or foil corporate transformation and change,"* by J.D. Duck, 2001, p 16-17.; *"Leading change,"* by J.P. Kotter, 1996, p. 21.; *"The improvement guide: A practical approach to enhancing organizational performance (2nd ed.),"* by G.J. Langley, R.D. Moen, K.M. Nolan, T.W. Nolan, C.L. Norman, and L.P. Provost, 2009, p. 98.

Plan phase. The PDSA cycle begins with the Plan phase. In this stage, the focus is on identifying the objective of the improvement plan, articulating questions and making predictions, and identifying who, what, where and when for carrying out the cycle (Langley et al., 2009). Elements of this stage align closely with the first three steps of Kotter's (1996) model, as well as the stagnation stage articulated by Duck (2001). In both cases, the concern is with awakening individuals to the pressing nature of a problem, forming a coalition, identifying a path forward, and preparing to embark on a change process.

In the planning stage, one way to formalize the objective of this OIP and to make predictions is through a needs assessment. For the purposes of this OIP, a needs assessment will be undertaken to help guide the development of the overall program, as well as for the career engagement module within the larger program. Appendix B outlines the proposed program, highlighting six competencies that are achieved through completion of doctoral studies at Institution A. The graduate school at Institution A will undertake focus groups, personal interviews, and a needs assessment, the results of which will help identify the focus of the overall program. At the same time, there is a need to drill down specifically to understand what students' needs are in the career space. To that end, one-on-one interviews with current students from across disciplines will help articulate the career engagement needs of students at Institution A. Some of the institutional findings may overlap with the larger body of literature on the issue of student career needs, and some findings may suggest the need for unique programming at Institution A. This information can inform not just the nature of the program's content, but also logistical details like program structure (e.g., face-to-face, online, or blended; if face-to-face or blended, what day of week, time of day, etc.). Appendix E outlines the proposed interview questions that will be asked of students, which will help inform the development of the career engagement module of the larger transitional competency and career engagement program.

Do phase. The second phase of the cycle is the Do phase. In this stage, the plan that was conceptualized in phase one is put into action. During this stage, observations are made and recorded. Kotter's (1996) steps of communicating a vision and empowering employees align well with this phase of the PDSA cycle, as does Duck's (2001) implementation stage. The trial and error approach to change articulated by Langley et al. (2009) supports implementing change on a small scale in order to minimize risks. With that in mind, this OIP proposes a phased

implementation plan, in which a pilot program involving a small cohort of student volunteers is undertaken before the initiative is rolled out to the entire campus.

In this stage, the evaluation will include reflective elements embedded into the program to ensure that the programming is meeting the identified learning outcomes. Reflective activities within a module or formative evaluations as homework for modules that span over multiple days will offer insight into how the students are connecting with the material and its delivery. For example, using a formative evaluation, like a 'start, stop, continue' activity throughout a session, will provide timely feedback on what students in the pilot see as working, what needs tweaked, and what needs removed altogether. This monitoring as the program rolls out will inform changes that will be made prior to the deployment of the program across campus following the pilot year.

At the immediate conclusion of each session within all modules, a summative evaluation in the form of a survey will help assess if the identified learning outcomes were realized. For example, Appendix F outlines the post-module survey items for the initial career engagement module on making informed career decisions. One element of the post-program evaluation will also include students returning to the self-assessment tool that they were asked to complete at the outset of the program and asking them to re-evaluate their level of proficiency on the identified competency. Their self-reporting will also assist in determining the degree to which the content addressed the needs and met the learning outcomes. The graduate school will conduct their own annual review of the broader program, and this information will also be used to evaluate the success of the career engagement module.

Study phase. Following implementation of the plan, the next phase of the cycle is the Study phase. In this stage, the outcomes of the plan are compared against the predictions made in the

planning stage and the assessment data is analyzed (Langley et al., 2009). This stage aligns with

Kotter's (1996) sixth stage, which focuses on creating quick wins. During the pilot, reporting on

high levels of student uptake and sharing positive student testimonials will help to demonstrate

quick wins to both the steering committee and stakeholders across the institution. As the pilot

program concludes, there will be an opportunity to assess feedback on what went well and to

communicate those gains to key stakeholders. These quick wins signal to stakeholders that the

plan is reasonable and achievable and encourages deeper and broader support from across the

institution. At the same time, the quick wins point the way for the next iteration of the program

in the Act phase.

Act phase. The final phase of the cycle is Act. In this stage, the learning from the previous

phases of the process is synthesized and will be used to inform decision-making as the PDSA

cycle begins again. Specifically, the learning can be used to adjust the goals, change the

methods, reformulate the theory entirely, or broaden the learning from a small scale pilot to a

complete implementation plan (Langley et al., 2009). This stage coincides with Kotter's (1996)

final stage, in which the changes that were undertaken become institutionalized. Duck (2001)

refers to this as fruition. In this stage, students have completed the first iteration of the first of

four years of the transitional competency and career engagement program, and the steering

committee has a good sense of the elements of the program that work well and areas for

improvement for the next cycle of the program.

This OIP proposes the implementation of a transitional competency and career engagement

program for students that will span each of the four years of their studies. The proposed program

is in response to an institutional problem of practice, whereby students are not supported in their

preparation for careers both inside and outside of the academy. In addressing the problem of

practice, a PDSA cycle of change will be implemented, helping to ensure that the proposed

change is well-conceived, monitored, and assessed in a manner that allows leaders to identify

successes and challenges as part of an iterative process.

Plan to Communicate the Need for Change and the Change Process

Communicating Change

The importance of good communication during any change initiative is underscored time and

again in change literature (Cawsey et al., 2016; Duck, 1993; Duck, 2001; Kotter, 1996).

According to Duck (1993), one the key purposes of a communication plan is to explain the

rationale for the change initiative. For this OIP, an intentional and coordinated focus on career

preparation beyond academic career preparation is a departure from the norm at Institution A.

Therefore, the communication plan must prepare stakeholders for the change by helping them

understand the context behind the change. Duck (1993) suggests that when change takes place,

people need time to hear, understand, and believe, especially when the change represents a vast

departure from what they are accustomed to or if they are initially resistant to the change. Some

stakeholders may on-board quickly to the change because it addresses a concern that they have

voiced, while others may resist (Duck, 1993). Similarly, Kotter (1996) contends that major

change is impossible if credible and abundant communication fails to persuade both the logical

and emotional needs of stakeholders. Like Duck (1993), Kotter advocates for "…tens of

thousands of communications…" (p. 94) tailored to specific audiences to help ensure a

successful change.

Four phases of the communication plan.

In their discussion of action planning and implementation, Cawsey et al. (2016) comment on

the importance of a good communication plan in the change process. They identify four phases

in a communication plan including pre-change approval; creating the need for change; midstream change and milestone communication; and confirming or celebrating the change success (Cawsey et al., 2016, p. 321). The key messages of the plan and communication channels will be determined by the specific phase in the plan.

   Pre-change phase. Duck (1993) and Kotter (1996) emphasize the importance of communication from the outset of a change initiative. In the early phases of change, communication is used to generate dialogue, gather information, understand the problem, and establish trust amongst the coalition. This emphasis on communication from the beginning aligns with Cawsey et al.'s (2016) first phase of a communication plan, referred to as the pre-change phase. In the pre-change phase, the emphasis is on convincing the top leaders of the organization that change is needed (Cawsey et al., 2016). The authors recommend focusing on those who can either influence change or have the authority to approve the change. In this phase, Cawsey et al. (2016) also promote the use of opinion leaders, who can be leveraged to communicate with, and positively influence other stakeholders. At Institution A, a pocket of champions who understand the challenges that students experience and are supportive of helping prepare them for alternative career paths will be activated. Opinion leaders exist up and down the organization, as well as outside of the university, so engaging these individuals in the pre-change phase and using them to promote the importance of the proposed change will be a strategy within the communication plan. Table 3.2 identifies audiences, strategies, messages, and channels for the pre-change phase.

Table 3.2

Communication Plan for Pre-change Phase

Pre-change Phase		
Audience	Strategies and messages	Channels
Steering Committee	• Selection of academic and service unit representatives, as well as students, to act as change team	• Face-to-face meetings • Retreats

	• Include opinion leaders, as well as conscientious objectors to help shape change initiative, anticipate pushback, and develop programming	• E-mail • Google drive
Provost	• Change is necessary; use external and internal data, including student feedback to build case • Demonstrate how change aligns with strategic plan, supports recruitment and attrition efforts of institution • Follow-up with complete written proposal outlining proposed initiative, expected outcomes, collaborative approach across all units, and specific budget ask	• Face-to-face meeting • Written proposal

Creating the need for change phase. In the second phase of the communication plan, referred to as creating the need for change, Cawsey et al. (2016) posit that leaders need to "…provide a clear, compelling rationale for the change" (p. 321). In this stage, communication can be aided by the use of data to draw comparisons between the institution and its competitors or to further justify the rationale for the change (Cawsey et al., 2016). In the absence of competitor data to draw on to make the case for change, the communication will draw on labour market statistics to show a declining academic labour market and help make the case for the need for change. If stakeholders understand the data about the academic labour market and the career destinations of PhDs, perhaps it will help move the conversation to one in which preparing students for non-academic careers is embraced. This phase of the communication plan also drills down to explain the need for change, reassure stakeholders, and clarify change process steps (Cawsey et al., 2016). Duck (2001) suggests that as organizations prepare for a change initiative, early communication should focus on context setting, outlining the process, and identifying who will be involved. Table 3.3 articulates a communication plan for the creating the need for change.

Table 3.3

Communication Plan for Creating the Need for Change Phase

Creating the Need for Change		
Audience	Strategies and messages	Channels
Associate Deans (Graduate) and Graduate Chairs	• Change is necessary; use internal and external data, including student feedback to set context • Personalize message based on department-specific information; to degree possible, demonstrate where graduates are employed, address any unique recruitment and retention concerns and show role change initiative could play in increasing recruitment and retention • Provide examples of places where similar models of change have succeeded • Clarify what support looks like (i.e., not asking for money, increasing workload of unit staff or faculty, etc.) • Seek support in influencing faculty in their departments to support change	• Face-to-face meetings
Faculty	• Change is necessary; use internal and external data, including student feedback to set context • Anticipate questions and respond accordingly • Demonstrate ways that students are already participating in career preparation activities without detracting from academic responsibilities; underscore that change initiative is, in fact, not a large departure, rather more structured • Provide concrete examples of what their support looks like (i.e., support does not require them to be career development experts or take on greater workload)	• Face-to-face meetings • Departmental meetings
Students	• Change is necessary; use internal and external data, including student feedback to set context • Situate messages in context of 'we heard you' and we are responding accordingly; students need to see selves as partners in change • Use communication channels to introduce pilot program and invite participation • Develop website and social media campaign to consistently communicate messaging about new program, personal and professional outcomes for participation	• Focus groups • 1:1 interviews • Targeted e-mail • Website • Social media

Midstream change and milestone communication phase. In the midstream change phase, the focus is on progress reports and obtaining feedback from stakeholders on outstanding issues (Cawsey et al., 2016). During this phase it is important to understand the degree to which

changes have been accepted by stakeholders, as well as any misconceptions that have surfaced

(Cawsey et al., 2016). Duck (2001) suggests that communication during this phase will help keep

the change initiative on track and ensure all stakeholders understand their role in the change

initiative. Both Cawsey et al. (2016) and Duck (2001) indicate that acknowledging and

celebrating wins and successes early and often are important in this phase, which will help

ensure interest and enthusiasm for the change. Table 3.4 outlines the communication plan for the

midstream change and milestone communication phase.

Table 3.4

Communication Plan for Midstream Change and Milestone Communication

Midstream change and milestone communication		
Audience	Strategies and messages	Channels
Provost	• Provide update on change initiative to date, demonstrating uptake in student participation, use student testimonials, and outline next steps	• Written update
Associate Deans (Graduate) and Graduate Chairs	• Provide faculty/department update on change initiative to date, providing specific participation rates of their unit • Continue dialogue about rationale, anticipated benefits, as on-boarding will be a continuous process, including as leadership changes	• E-mail and face-to-face updates
Students	• Further develop and refine promotional campaign • As program rolls out and more participants attend, identify FAQs and post to website and through other communication channels • Focus group to determine what is and isn't working	• Focus groups • Website • Social media
Steering Committee	• Reflect on feedback to date, to assess what is and isn't working • Celebration of launch of pilot • Discussion of next steps and planning for next change cycle	• Retreat

Confirming and celebrating change phase. The final phase of the communication plan,

confirming the change process, focuses on informing stakeholders of the success of the change

and celebrating the change as a whole, as well as setting the stage for the next iteration of the

change cycle (Cawsey et al., 2016). Table 3.5 reflects elements of the communication plan for

the confirming and celebrating change phase of the implementation plan.

Table 3.5

Communication Plan for Confirming and Celebrating Change phase

Confirming and celebrating change		
Audience	Strategies and messages	Channels
Associate Deans (Graduate) and Graduate Chairs	• Reporting on key successes, learnings of first iteration of change cycle, including final participation data for their units • Ongoing dialogue to continue to address concerns, secure support for change	• Written update • Face-to-face meetings
Students	• Reporting on success of pilot program, establishing next steps for pilot program participants as they enter year two of the program • Convene focus groups of participants to gather additional feedback on pilot for use in next cycle of change • Use student testimonials for recruitment literature and on website for incoming class; demonstrate commitment Institution has made to career development of its students • Create promotional campaign for use during recruitment and at orientation to build awareness of program, encourage participation	• Focus groups • Website • Recruitment literature • Orientation material

Communicating with Stakeholders

The proposed change initiative in this OIP requires broad support from across the institution.

However, three key stakeholders emerge as critical to the success of the change initiative: senior

administration, faculty, and students. The issue of preparing students for diverse careers needs to

be framed differently for each of these audiences, as each hold unique perspectives and view the

issue from different lenses.

Senior administration. For the purposes of this OIP, senior administration includes the

Provost, Vice-Provost (graduate school), Associate Deans (Graduate), and Graduate Department

Chairs. At Institution A, the Vice-Provost played a lead role in surfacing the issue of student

preparation for diverse careers and in leading the call to address the problem. As the plan begins

to take shape and moves towards implementation, the Vice-Provost will play an important role in

the overall communication strategy, particularly in framing messaging for the Provost and

faculty.

While the proposed change initiative does not require formal approval from the Provost (i.e.,

the introduction of a non-credit program is outside the purview of the Provost), support at this

highest administrative level is still important for several reasons. In the first instance, as the

proposed change moves through iterative cycles and builds momentum, there will need to be a

corresponding increase in financial support. The Provost approves budget requests, and a

compelling argument that speaks to how the change initiative responds to the institution's ability

to achieve goals associated with graduate students is critical. Therefore, the communication to

the Provost focuses on three key messages:

- the proposed change connects with the institution's strategic plan and the change will help the institution realize its strategic goal of preparing graduate students for success within and beyond academia (Institution A, 2014a);

- the change initiative will assist the institution in maintaining a competitive edge against other institutions competing for the same students; and

- the change will assist the institution in its student retention efforts. Perceived mismatches between students' expectations and the reality of graduate work, and the implications of the students' perceived career options has been identified as a contributor to student attrition (Nerad and Sands Miller, 1996).

Associate deans and graduate department chairs, as agents of change within their faculties and

departments, play a critical role in the success of the change initiative. Their positionality

between the highest level of the administration and faculty facilitates associate deans' and

department chairs' ability to "…facilitate top-down and promote bottom-up change…" (Gaubatz & Ensminger, 2017, p. 142) and consequently their acceptance and promotion of the proposed change is important. Gaubatz and Ensminger (2017) note that based on their organizational position and potential to influence others, department chairs in particular can serve a crucial role in the implementation phase.

   Faculty. Faculty members, who act in supervisory roles for students, are a second stakeholder group that require a specific communication strategy and plan. One can anticipate a number of questions and concerns from this group about the proposed change initiative, many of which will stem from an academic culture in which the assumption is that students are preparing for an academic career. In particular, as discussed in Chapter One, some faculty express concern that any emphasis on preparation for careers other than those in the professoriate dilute the very purpose of doctoral studies and therefore should not be undertaken. For this group especially, constructing key messages that leverage the value they place on evidenced-based decision-making is one approach to help persuade them to support the change initiative. Working within a culture and structure that values data for the purposes of making improvements, it stands to reason that communications with this group of faculty will necessarily draw on statistical data and research reported in peer-reviewed journals to demonstrate why the change initiative is important (Datnow & Park, 2014).

   Other faculty support student preparation for broader career choices, and their concerns will likely focus on their capacity and competency in the non-academic career realm (Van Wyck, 2017). Indeed, academic units are unable to offer robust career services and programs and have limited knowledge about career options and the career development process (Lehker & Furlong, 2006). Consequently, the communication with faculty must underscore the significant role they

play in supporting students in their preparation for diverse careers, while at the same time

conveying the expectation that doing so is a collaborative process with support units who are

experts in career development (Van Wyck, 2017). Van Wyck (2017) frames the role of faculty in

their students' career development, suggesting that it "…takes a village to find a career befitting

your students' credentials and talent" (para. 3). Communications with this group, who are

already inclined to support the change initiative, will focus on offering concrete examples of

what faculty support looks like, assuaging any fears associated with capacity and competency.

Van Wyck (2017) suggests that supporting students' preparation for diverse careers can be as

simple as initiating career conversations and understanding students' career goals, encouraging a

strategic and long-term approach to career preparation, and learning about the career resources

available on campus in order to make appropriate referrals.

   Students. The third stakeholder group that is critically important to the proposed change is

students. The introduction of a transitional competency and career engagement program is a

response to a problem that has been articulated by many students and alumni (Arnold & Smith,

2015). While many students have advocated for a graduate student centric response to

preparation for academic and non-academic careers, some students will question its necessity.

The communication plan for this group will need to articulate the benefits of participation in the

program, demonstrate how the program has been designed for a graduate student audience,

assure students that it will not create additional work, and assure them that their supervisors will

not penalize them for participating.

   Not unlike faculty, students also place value on evidence-based decision making, so

leveraging data and research to provide the rationale for the introduction of the program will be a

key piece of the communications with this group. In particular, information that shows the

realities of both the academic and non-academic labour market and illustrates the discrepancies

between the reality and students' expectations (Golde & Dore, 2001; Lehker & Furlong, 2006)

will be used to demonstrate the need for the change. This is especially important messaging for

students who are convinced that they will be in the minority who go on to secure tenure-track

positions; they are less likely to buy into the need for a program that addresses preparation for

careers inside and outside of the academy. Part of the communication will focus on the value of

the competencies developed through the program for both academic and non-academic career

pursuits.

In the case of senior administration, faculty, and students, their buy-in for the change initiative

is critical to its success. Their endorsement sends a message across the institution, as well as

externally, that student career preparation matters at Institution A and encourages students to

avail themselves of career-related programming (Lehker & Furlong, 2006).

Communication Plan

Cawsey et al. (2016) indicate that the communication plan should aim to accomplish four

goals. First, the need for change needs to be infused across the institution. In the case of this OIP,

the communication plan will focus on three key stakeholder groups (as discussed above), and

will also permeate all parts of the institution as the change unfolds. Second, the communication

plan helps stakeholders understand the personal impact of the change. The proposed change will

most profoundly affect faculty and students, but also has implications for academic and support

units more broadly. Third, the communication plan outlines how jobs or structures will change

because of the change. Finally, the communication plan is a living document that informs people

about progress on an ongoing basis. Appendix G illustrates a proposed communications plan for

each of the four stages discussed in the Communicating Change section of this chapter.

Not unlike any change initiative, the success of this OIP relies on the ability of the change leaders to communicate effectively. Any communication plan needs to be well thought out and leaders "…need to be clear about how to get the right information to the right people at the right time through the right medium (for the recipient)" (Cameron & Green, 2004, p. 181). Failure to communicate or to communicate effectively before, during, and after a change initiative can jeopardize its success.

Chapter Summary

Chapter Three explored elements of change implementation, evaluation, and communications. Change plan goals and priorities were identified for the first change cycle, and a PDSA model was introduced as the mechanism for monitoring and evaluating the change plan. A communication plan was articulated and identified stakeholders, key messages and strategies, and communication channels. The chapter concludes with a consideration of next steps and future considerations.

Next Steps and Future Considerations

Even as Institution A moves towards the implementation of a centrally organized transitional competency and career engagement program, next steps and future considerations for evolving the change initiative will need to be identified and explored. Three key issues for consideration include transitioning from the pilot to full implementation, embedding the program into the curriculum, and engaging employers more fully in the programming.

The implementation plan for the change initiative includes an initial pilot program with optional participation. However, full program implementation will see participation transition from optional to mandatory participation. Managing this transition successfully will be one of the immediate next steps of the steering committee. There are logistical issues to address including

how to cycle 400 incoming students a year through the program, while sustaining more than that in years two, three, and four of the program. Human and space resources are limited and in many cases the content development and delivery is 'side of desk' work for staff who are already at capacity. Delivering modules repeatedly in order to cycle the number of students through the program will be a significant challenge that will need to be resolved. At the same time as these logistical issues pose a challenge, the steering committee needs to continue the dialogue about the necessity of a mandatory versus optional program and convince students and faculty of its value.

A future consideration, which may also help address some of the aforementioned logistic issues, is to move from a co-curricular program to a curricular one. Many doctoral programs offer a professionalism course as part of their curriculum, but they vary widely in content. One future avenue for the steering committee to explore is the conversion of these professionalism courses to transitional competency and career engagement courses, moving the modules from the co-curricular program proposed in the change initiative to credit-bearing courses that appear on a transcript. In doing so, programming can be tailored to disciplines, participation in programming will not be seen as interfering with the students' research and teaching responsibilities, and career preparation as part of the PhD experience is legitimized.

A final consideration for further exploration is the incorporation of employers into the conversation about student career preparation. In its early stages, research and institutional expertise will inform the development of the program. However, one of the motivations for addressing the problem of non-academic career preparation stems from feedback from employers, who suggest that students lack the skills necessary for careers outside of the academy. The steering committee may consider inviting employers to join the group.

Alternatively, there may be value in creating an employer advisory committee to review the programming, its desired outcomes, and offer feedback on the degree to which the program can address their concerns surrounding the hiring of PhDs.

Conclusion

Graduate education is an integral part of the Canadian academic and economic landscape. Largely understood to support the development of those interested in rigorous scholarship to advance the social good, research PhDs have historically been the vehicle for entry into the academy. The depression of the academic labour market in many disciplines, shifts in expectations of doctoral degree holders' societal contributions, political influence, and the changing career interests of those pursuing doctoral studies, have converged to generate critical analysis of the purpose of the doctorate and associated career pathways. Increasingly, PhD holders are securing employment in not only higher education, but also in diverse sectors within the economy. Indeed, unemployment rates amongst PhD holders are low, which suggests that the doctorate has much to offer to a range of employers. Despite their labour market successes, PhDs indicate that they were unaware of, or unprepared for, careers outside of the academy.

To address the identified gap in awareness and preparation for careers both inside and outside the academy, institutions need to be more proactive and move beyond skills development workshops to something more embedded in the culture of graduate education. While a focus on employability, especially for non-academic careers, represents a significant change in practice that will meet with resistance, students must be the institution's priority. The mandatory transitional competency and career engagement program proposed in this OIP provides a starting point for Institution A to do more to intentionally prepare its students to successfully transition

into diverse careers, and indeed to reflect twenty first century employment realities of our

students.

References

Abrahamson, K. N. (2008). *The challenge of change: Engaging one California community*

   college in a student learning outcomes initiative. University of California, Davis.

Aiken, C., & Keller, S. (2009). The irrational side of change management. Retrieved November

   1, 2017, from https://www.mckinsey.com/business-functions/organization/our-insights/the-

   irrational-side-of-change-management

Allen, J. (2013). Internships have a role in graduate programs. Retrieved May 13, 2017, from

   http://www.universityaffairs.ca/opinion/in-my-opinion/internships-have-a-role-in-graduate-

   programs/

Altbach, P. G. (2003). Doctoral education: Present realities and future trends. *College and*

   University, 80(2), 3–10. Retrieved from http://eric.ed.gov/?id=EJ732581

Argyris, C. (1995). Action science and organizational learning. *Journal of Managerial*

   Psychology, *10*(6), 20–26.

Arnold, H., & Smith, C. (2015). *Students weigh in: National analysis of results from the 2013*

   Canadian Graduate and Professional Student Survey. Toronto. Retrieved from

   http://www.heqco.ca/SiteCollectionDocuments/CGPSS Final Report-ENG.pdf

Aspenlieder, E., & Vander Kloet, M. (2014). Listen up! Be responsible! What graduate students

   hear about university teaching, graduate education and employment. *Canadian Journal of*

   Higher Education, *44*(3), 20–39.

Barlow, S. (2017). The change gym. Retrieved October 29, 2017, from

   https://thechangegym.com/reflections-on-kotters-eight-step-model/

Beauchamp, T. L., & Bowie, N. E. (1988). *Ethical theory and business* (3rd ed.). Englewood

   Cliffs, NJ: Prentice Hall.

Bennett, C. (2017). Teaching the teacher using the train the trainer model: An effective

    professional development strategy. Retrieved November 19, 2017, from

    https://www.thoughtco.com/train-the-teacher-4143125

Blake, R. R., & Mouton, J. S. (1964). *The Managerial Grid: Key orientations for achieving*

    production through people. Houston, Texas: Gulf Publishing Company.

Blanchard, K., Zigarmi, P., & Zigarmi, D. (2013). *Leadership and the one minute manager:*

    Increasing effectiveness through Situational Leadership II. New York: William Morrow.

Bolman, L.G., & Deal, T.E. (2013). *Reframing organizations: Artistry, choice, and leadership*

    (5th ed.). San Francisco, CA: Jossey-Bass.

Boud, D. (2001). Introduction: Making the move to peer learning. In D. Boud, R. Cohen, & J.

    Sampson (Eds.), *Peer learning in higher education: Learning from and with each other* (pp.

    1-20)*.* Sterling, VA: Stylus Publishing Inc.

Bowers, D.G., & Seashore, S.E. (1966). Predicting organizational effectiveness with a four-

    factor theory of leadership. *Administrative Science Quarterly, 11*(2), 238–263. Retrieved from

    http://www.jstor.org/stable/2391247

Bowness, S. (2015). What's up with alt-ac careers: Grad students are looking for university

    support to help prepare them for careers outside the professoriate. Retrieved May 7, 2017,

    from http://www.universityaffairs.ca/features/feature-article/whats-up-with-alt-ac-careers/

Cameron, E., & Green, M. (2004). *Making sense of change management: A complete guide to*

    the models, tools, and techniques of organizational change. Sterling, Virginia: Kogan Page.

Cawsey, T. F., Deszca, G., & Ingols, C. (2016). *Organizational change: An action-oriented*

    toolkit (3rd ed.). Thousand Oaks, CA: SAGE Publications.

Charbonneau, L. (2011, November). Is Canada producing too many PhDs? Yes, no and maybe. *University Affairs*. Retrieved from http://www.universityaffairs.ca

Chiose, S. (2013, April 30). PhD numbers have doubled but few graduates will find teaching jobs, Ontario study finds. *The Globe and Mail*. Retrieved from https://beta.theglobeandmail.com/news/national/education/phd-numbers-have-doubled-but-few-graduates-will-find-teaching-jobs-ontario-study-finds/article11643817/?ref=http://www.theglobeandmail.com&

Chiose, S. (2016, January 24). More PhDs finding jobs as tenure-track professors, study says. *The Globe and Mail*. Retrieved from https://beta.theglobeandmail.com/news/national/more-phds-finding-jobs-as-tenure-track-professors-study-says/article28367087/?ref=http://www.theglobeandmail.com&

College of Registered Psychotherapists of Ontario. (2011). Code of ethics. Retrieved from https://www.crpo.ca/wp-content/uploads/2017/08/Code-of-Ethics.pdf.

Collini, S. (2012). What are universities for? London, UK: Penguin.

Craswell, G. (2007). Deconstructing the skills training debate in doctoral education. *Higher Education Research & Development*, *26*(4), 377–391. https://doi.org/10.1080/07294360701658591

Cumming, J. (2010a). Contextualised performance: Reframing the skills debate in research education. *Studies in Higher Education*, *35*(4), 405–419. https://doi.org/10.1080/03075070903082342

Cumming, J. (2010b). Doctoral enterprise: A holistic conception of evolving practices and arrangements. *Studies in Higher Education*, *35*(1), 25–39. https://doi.org/10.1080/03075070902825899

Datnow, A., & Park, V. (2014). *Data-driven leadership*. San Francisco, CA: Jossey-Bass.

Desjardins, L. (2012). *Profile and labour market outcomes of doctoral graduates from Ontario universities* (Vol. 1333). Ottawa. https://doi.org/ISSN: 1711-831X ISBN: 978-1-100-20733-9

Duck, J. (1993). Managing change: The art of balancing. *Harvard Business Review*, (November-December). Retrieved from https://hbr.org/1993/11/managing-change-the-art-of-balancing

Duck, J. (2001). *The change monster: The human forces that fuel or foil corporate transformation and change*. New York, NY: Crown Business.

Edge, J., & Munro, D. (2015). *Inside and outside the academy: Valuing and preparing PhDs for careers.* Ottawa, ON: The Conference Board of Canada.

Emery, G. (2005). [Citation information withheld for anonymization purposes].

Flaherty, C. (2017). New calls for clear, easily accessible data on PhD program outcomes in life sciences. Retrieved December 16, 2017, from https://www.insidehighered.com/news/2017/12/15/new-calls-clear-easily-accessible-data-phd-program-outcomes-life-sciences

Fullick, M. (2012). Filling in the gaps? Questions about goals and outcomes of PhD education. *University Affairs.* Retrieved from http://www.universityaffairs.ca/opinion/speculative-diction/filling-in-the-gaps-questions-about-goals-and-outcomes-of-phd-education/

Fullick, M. (2013a, April 12). Who will hire all the PhDs? Not Canada's universities. *The Globe and Mail*. Retrieved from https://beta.theglobeandmail.com/news/national/education/who-will-hire-all-the-phds-not-canadas-universities/article10976412/?ref=http://www.theglobeandmail.com&

Fullick, M. (2013b, July 17). War of attrition: Asking why PhD students leave. *University Affairs.* Retrieved from http://www.universityaffairs.ca

Fullick, M. (2015, March 25). PhD overproduction is not new and faculty retirements won't

    solve it. *University Affairs*. Retrieved from http://www.universityaffairs.ca

Gary, K. (2006). Leisure, freedom, and liberal education. *Educational Theory, 56*(2), 121–136.

    https://doi.org/10.1111/j.1741-5446.2006.00007.x

Gatfield, T. (2005). An investigation into PhD supervisory management styles: Development of

    a dynamic conceptual model and its managerial implications. *Journal of Higher Education*

    Policy and Management, 27(3), 311-325. https://doi.org/10.1080/13600800500283585

Gaubatz, J. A., & Ensminger, D. C. (2017). Department chairs as change agents: Leading change

    in resistant environments. *Educational Management Administration & Leadership, 45*(1),

    141–163. https://doi.org/10.1177/1741143215587307

Gilbert, R., Balatti, J., Turner, P., & Whitehouse, H. (2004). The generic skills debate in research

    higher degrees. *Higher Education Research & Development, 23*(3), 375–388.

    https://doi.org/10.1080/0729436042000235454

Girves, J. E., & Wemmerus, V. (1988). Developing models of graduate student degree progress.

    The Journal of Higher Education, 59(2), 163–189. Retrieved from

    http://www.jstor.org/stable/1981691

Gladwell, M. (2000). *The tipping point: How little things make a big difference*. Boston, MA:

    Little, Brown and Company.

Glover, J., Friedman, H., & Jones, G. (2002). Adaptive leadership: When change is not enough

    (Part one). *Organization Development Journal, 20*, 15–32.

Glover, J., Rainwater, K., Jones, G., & Friedman, H. (2002). Adaptive leadership: Four

    principles for being adaptive (Part two). *Organization Development Journal, 20*, 18–38.

Goldberg, D. (2015). John Kotter: Leading change in higher education. United States:

    VoiceAmerica.com. Retrieved from https://www.voiceamerica.com/show/2454/big-beacon-

    radio

Golde, C., & Dore, T. (2001). *At cross purposes: What the experiences of today's doctoral*

    students reveal about doctoral education. Pew Charitable Trusts (Vol. January). Retrieved

    from http://files.eric.ed.gov/fulltext/ED450628.pdf

Gutek, G.L. (1997). Conservatism and education. In G.L. Gutek (Ed.), *Philosophical and*

    ideological perspectives in education (2nd ed., pp. 197–210). Boston, MA: Allyn and Bacon.

Hartnett, R. T., & Katz, J. (1977). The education of graduate students. *The Journal of Higher*

    Education, 48(6), 646–664.

Harvey, L. (2000). New realities: The relationship between higher education and employment.

    Tertiary Education and Management, 6(1), 3–17. https://doi.org/

    10.1080/13583883.2000.9967007

Heifetz, R. (1994). *Leadership without easy answers*. Cambridge, MA: The Belknap Press of

    Harvard University Press.

Heifetz, R., Grashow, A., & Linsky, M. (2009). *The practice of adaptive leadership: Tools and*

    tactics for changing your organization and the world. Boston, MA: Harvard Business Press.

Hill, C.E. & O'Brien, K. M. (1999). *Helping skills: Facilitating exploration, insight, and action.*

    Washington, D.C.: American Psychological Association.

Hurd, D.L. (2007). *Leading transformational change: A study of internationalization at three*

    universities in the United States. Florida Atlantic University.

Institution A. (n.d.). [Citation information withheld for anonymization purposes].

Institution A. (2014a). [Citation information withheld for anonymization purposes].

Institution A. (2014b). [Citation information withheld for anonymization purposes].

Institution A. (2016). [Citation information withheld for anonymization purposes].

Institution A. (2017a). [Citation information withheld for anonymization purposes].

Institution A. (2017b). [Citation information withheld for anonymization purposes].

Institution A. (2017c). [Citation information withheld for anonymization purposes].

Institution A. (2017d). [Citation information withheld for anonymization purposes].

Institution A. (2017e). [Citation information withheld for anonymization purposes].

Iqbal, M. (2015). In Canada you can get a PhD, but maybe not a job. Retrieved September 24,
    2017, from http://www.huffingtonpost.ca/mahmood-iqbal/phd-in-canada_b_1916146.html

Kendall, G. (2002). The crisis in doctoral education: A sociological diagnosis. *Higher Education
    Research & Development, 21*(2), 131–141. https://doi.org/10.1080/07294360220144051

Kisunzu, C. H. (2011). *Anchoring change in higher education: Narratives from senior executives
    at Malcolm Baldrige award-winning institutions*. Andrews University.

Kotter, J. P. (1996). *Leading change*. Boston, MA: Harvard Business School Press.

Kouzes J.M. & Posner, B. Z. (2002). *The leadership challenge* (3rd ed.). San Francisco, CA:
    Jossey-Bass.

Langley, G.J., Moen, R.D., Nolan, K.M., Nolan, T.W., Norman, Clifford, L., & Provost, L.P.
    (2009). *The improvement guide: A practical approach to enhancing organizational
    performance* (2nd ed.). San Francisco, CA: Jossey-Bass.

Leckie, G. (2014). [Citation information withheld for anonymization purposes].

Lehker, T., & Furlong, J. S. (2006). Career services for graduate and professional students. *New
    Directions for Student Services, 115*, 73–83. https://doi.org/10.1002/ss.217

Lovitts, B. E. (2001). *Leaving the ivory tower: The causes and consequences of departure from doctoral study*. Lanham, Maryland: Rowman & Littlefield Publishers Inc.

Maldonado, V., Wiggers, R., & Arnold, C. (2013). So you want to earn a PhD? The attraction, realities, and outcomes of pursuing a doctorate. *The Higher Education Quality Council of Ontario*, (Issue Paper No. 15), 1–41.

Manathunga, C., Pitt, R., Cox, L., Boreham, P., Mellick, G., & Lant, P. (2012). Evaluating industry-based doctoral research programs: Perspectives and outcomes of Australian Cooperative Research Centre graduates. *Studies in Higher Education, 37*(7), 843–858. https://doi.org/10.1080/03075079.2011.554607

McAlpine, L., & Norton, J. (2006). Reframing our approach to doctoral programs: An integrative framework for action and research. *Higher Education Research & Development, 25*(1), 3–17. https://doi.org/10.1080/07294360500453012

McCowan, T. (2015). Should universities promote employability? *Theory and Research in Education, 13*(3), 267–285. https://doi.org/10.1177/1477878515598060

Nadler, D.A., & Tushman, M.L. (1980). A model for diagnosing organizational behavior. *Organizational Dynamics*, 35–51.

Nadler, D.A., & Tushman, M.L. (1999). The organization of the future: Strategic imperatives and core competencies for the 21st century. *Organizational Dynamics, 28*(1), 45–60.

Nauheimer, H. (2009). Change model 3: John Kotter's 8 steps to leading change. Retrieved December 16, 2017, from http://www.change-management-blog.com/

Nerad, M. (2004). The PhD in the US: Criticisms, facts and remedies. *Higher Education Policy, 17*(2), 183–199. https://doi.org/10.1057/palgrave.hep.8300050

Nerad, M. (2012). Conceptual approaches to doctoral education: A community of practice.

Alternation, 2, 57–72. Retrieved from

http://unike.au.dk/fileadmin/www.unike.au.dk/Publications/Nerad__Maresi._Conceptual_App

roaches_to_Doctoral_Education.pdf

Nerad M., & Sands Miller, D. (1996). Increasing student retention in graduate and professional

programs. *New Directions for Institutional Research, 92*, 61-76.

Neumann, R., & Tan, K. K. (2011). From PhD to initial employment: The doctorate in a

knowledge economy. *Studies in Higher Education, 36*(5), 601–614.

https://doi.org/10.1080/03075079.2011.594596

Northouse, P. G. (2016). *Leadership: Theory and practice* (7th ed.). Thousand Oaks, CA: SAGE

Publications.

Nyquist, J. D. (2002). The PhD: A tapestry of change for the 21st Century. *Change,*

(November/December 2002), 12–20.

Nyquist, J. D., & Woodford, B. J. (2000). *Re-envisioning the PhD: What concerns do we have?*

Retrieved from

http://www.google.co.uk/url?sa=t&source=web&cd=1&ved=0CBgQFjAA&url=http%3A%2

F%2Fwww.grad.washington.edu%2Fenvision%2Fpdf%2Fconcernsbrief.pdf&ei=XdjoTc-

YAsPoOcO1obQB&usg=AFQjCNFfollurE2OcbXdBGC6wBMB8x3wKg&sig2=mKxmkPni

C963szrGEF4FXg

Nyquist, J.D., Woodford, B.J., & Rogers, D.L. (2004). Re-envisioning the PhD: A challenge for

the twenty-first century. In D.H. Wulff & A.E. Austin (Eds.), *Paths to the professoriate:*

Strategies for enriching the preparation of future faculty (pp. 194–216). San Francisco, CA:

Jossey-Bass.

Ontario Universities Council on Quality Assurance. (2015). OCAV's graduate degree level

expectations. Retrieved June 18, 2017, from http://oucqa.ca

Osborne, B.J., Carpenter, S., Burnett, M., Rolheiser, C., & Korpan, C. (2014). Introduction from

the Special Issue Editors: Preparing Graduate Students for a Changing World of Work.

Canadian Journal of Higher Education, 44(3), i–ix.

Pannapacker, W. (2013). Just look at the data, if you can find any. Retrieved May 13, 2017, from

http://www.chronicle.com/article/Just-Look-at-the-Data-if-You/139795

Porter, S.D., & Phelps, J.M. (2014). Beyond skills: An integrative approach to doctoral student

preparation for diverse careers. *Canadian Journal of Higher Education, 44*(3), 54–67.

Retrieved from http://ojs.library.ubc.ca/index.php/cjhe/article/view/186038

Randall, L.M., & Coakley, L.A. (2007). Applying adaptive leadership to successful change

initiatives in academia. *Leadership & Organization Development Journal, 28*(4), 325–335.

https://doi.org/10.1108/01437730710752201

Raven, J. (2005). Liberal education and liberalism in modern society. *The Good Society, 14*(3),

29–37. https://doi.org/10.1353/gso.2006.0014

Reynolds, L. (n.d.). Leading change: John Kotter's 8 step model. Retrieved December 16, 2017,

from http://www.thehubevents.com/leading-change-john-kotter-039-s-8-step-model/

Rose, M. (2012). *Graduate student professional development: A survey with recommendations*.

Retrieved from http://www.cags.ca/documents/publications/working/Report on Graduate

Student Professional Development - A survey with recommendations FINAL Eng.OCT

2012.pdf

Sekuler, A.B., Crow, B., & Annan, R.B. (2013). Beyond labs and libraries: Career pathways for

doctoral students. *The Higher Education Quality Council of Ontario*.

St Clair, R., Hutto, T., MacBeth, C., Newstetter, W., McCarty, N. A., & Melkers, J. (2017). The

"new normal": Adapting doctoral trainee career preparation for broad career paths in science.

PLoS ONE, 12(5), 1–19. https://doi.org/10.1371/journal.pone.0181294

Stich, E.B.K. (2008). *Elements of successful community college organizational change: A meta-

ethnographic analysis.* Capella University.

Stoll, L. (2006). The future of educational change: System thinkers in action; response to

Michael Fullan. *Journal of Educational Change, 7*(3), 123-127.

Usher, R. (2002). A diversity of doctorates: Fitness for the knowledge economy? *Higher

Education, 21*(2), 143–153. https://doi.org/10.1080/0729436022014406

Van Wyck, J.M. (2017). The changing graduate adviser-advisee relationship. Retrieved

December 6, 2017, from www.insidehighered.com

Venkatesh, V., Rabah, J., Lamoureux-Scholes, L., & Pelczer, I. (2014). Development,

implementation, and evaluation of a professional skills development program: The case of

Concordia University's GradProSkills. *Canadian Journal of Higher Education, 44*(3), 39–54.

Wood, M. (2017). A culture of career transitions support is needed for grad students. Retrieved

from https://www.universityaffairs.ca/career-advice/beyond-the-professoriate/culture-career-

transitions-support-needed-grad-students/

Yukl, G., & Mahsud, R. (2010). Why flexible and adaptive leadership is essential. *Consulting
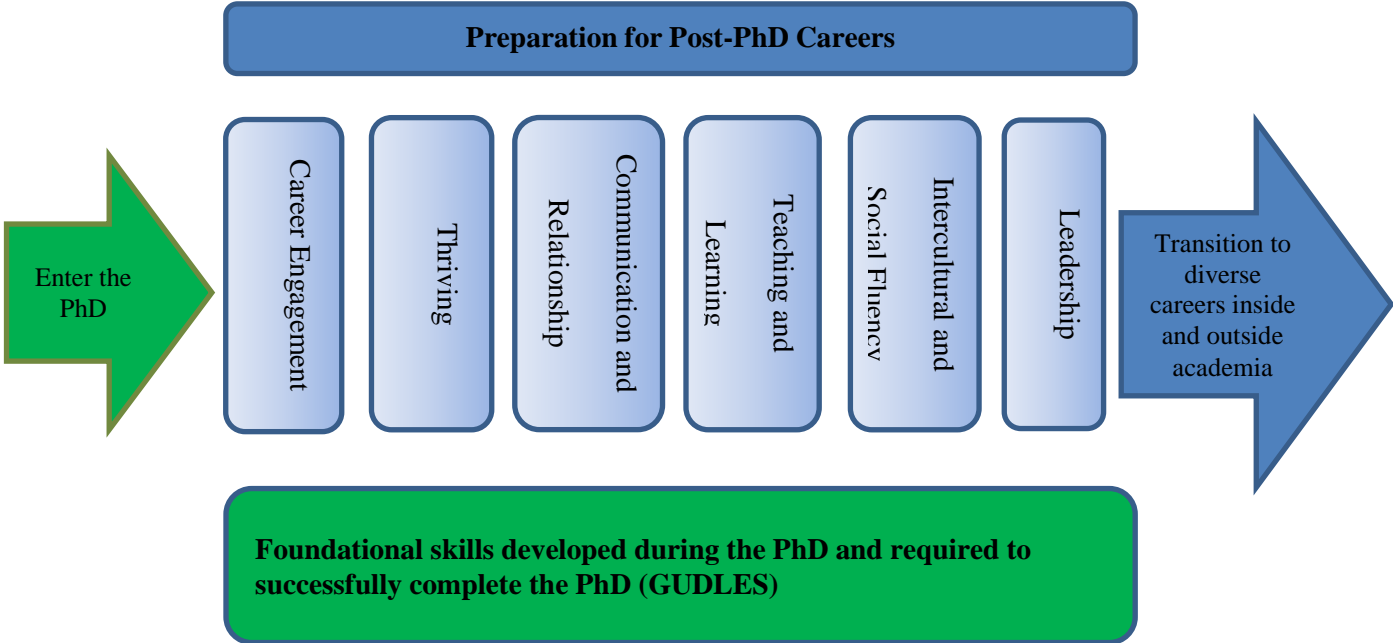
Psychology Journal: Practice and Research, 62*(2), 81–93. https://doi.org/10.1037/a0019835
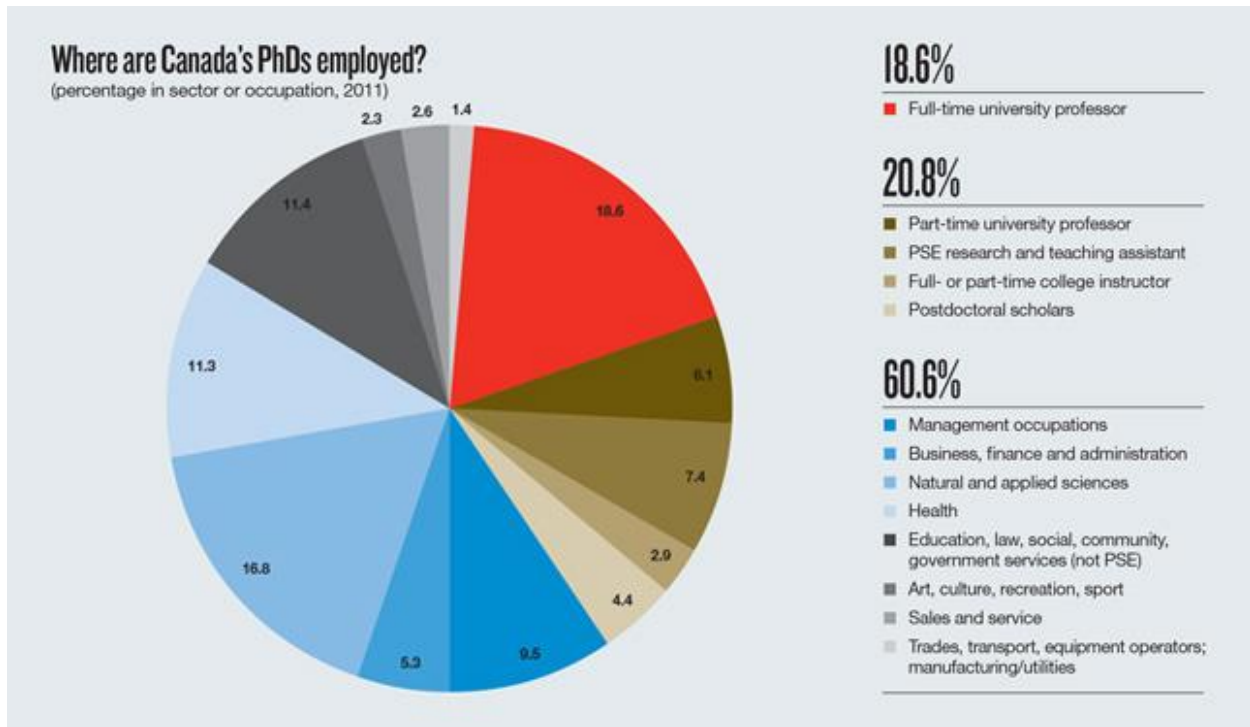
Appendix A

Where are Canada's PhDs employed? Adapted from *"Inside and outside the academy: Valuing and preparing PhDs for careers,"* by J. Edge and D. Munro, 2015, p 17. Copyright 2015 by Conference Board of Canada. Fair Dealing.

Appendix B

Proposed Transitional Competency and Career Engagement Program (Institution A, 2016)

Preparation for Post-PhD Careers

Enter the PhD → Career Engagement | Thriving | Communication and Relationship | Teaching and Learning | Intercultural and Social Fluency | Leadership → Transition to diverse careers inside and outside academia

Foundational skills developed during the PhD and required to successfully complete the PhD (GUDLES)

Appendix C

OCAV's Graduate Degree Level Expectations (Ontario Universities Council on Quality Assurance, 2015)

	Master's degrees This degree is awarded to students who have demonstrated the following:	Doctoral degree This degree extends the skills associated with the master's degree and is awarded to students who have demonstrated the following:
1. Depth and breadth of knowledge	A systematic understanding of knowledge, including, where appropriate, relevant knowledge outside the field and/or discipline, and a critical awareness of current problems and/or new insights, much of which are at, or informed by, the forefront of their academic discipline, field of study, or area of professional practice.	A thorough understanding of a substantial body of knowledge that is at the forefront of their academic discipline or area of professional practice including, where appropriate, relevant knowledge outside the field and/or discipline.
2. Level of application of knowledge	Competence in the research process by applying an existing body of knowledge in the critical analysis of a new question or of a specific problem or issue in a new setting.	The capacity to: a) undertake pure and/or applied research at an advanced level; and b) contribute to the development of academic or professional skills, techniques, tools, practices, ideas, theories, approaches, and/or materials.
3. Professional capacity / autonomy	a) The qualities and transferable skills necessary for employment requiring: i) exercise of initiative and of personal responsibility and accountability; and ii) decision-making in	a) The qualities and transferable skills necessary for employment requiring the exercise of personal responsibility and largely autonomous initiative in complex situations;

	complex situations; b) The intellectual independence required for continuing professional development; c) The ethical behaviour consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; and d) The ability to appreciate the broader implications of applying knowledge to particular contexts.	b) The intellectual independence to be academically and professionally engaged and current; c) The ethical behaviour consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; and d) The ability to evaluate the broader implications of applying knowledge to particular contexts.
5. Level of communications skills	The ability to communicate ideas, issues and conclusions clearly.	The ability to communicate complex and/or ambiguous ideas, issues and conclusions clearly and effectively.
6. Awareness of limits of knowledge	Cognizance of the complexity of knowledge and of the potential contributions of other interpretations, methods, and disciplines.	An appreciation of the limitations of one's own work and discipline, of the complexity of knowledge, and of the potential contributions of other interpretations, methods, and disciplines.

Appendix D

Three Possible Solutions to Problem of Practice

Possible Solution	Resource needs	Benefits	Consequences
Status Quo	• No change to existing resources	• Easiest option and represents the path of least resistance • No resource costs • Upholds the traditional purpose of PhD and is what academics are most familiar and comfortable with	• Organization falls behind competitors who are addressing the academic career challenge for PhDs; those considering pursuing a PhD may apply to other schools, who are seen to be more innovative, supportive • Sends clear, negative message to current students who are looking for supports; may feel like the institution does not care
Train-the-Trainer	• Time constraints on staff to teach faculty content to level required • Time constraints for roll-out; availability of faculty and staff will pose challenges for training schedule	• Career development can be embedded within the course work, thereby reducing amount of outside-the-class time students need to spend on it • Fewer support staff resources needed to deliver material, which translates to less financial resources needed • Buy-in from Faculty • Consistency in programming	• Faculty may see this as another 'download' of responsibilities, and resist • Preferable to have 'experts' delivering career development content

| Integrated PhD | • Time to get campus buy-in, develop and implement programming
• Human resource intensive to develop new programming, as well as to coordinate and deliver
• Financial resources are required to hire a coordinator, potential development costs | • Leadership for delivery of programming lies with support units, so content is taught by 'experts', and there is no downloading of responsibility to faculty members
• Introduces preparation for non-academic careers alongside preparation for academic careers
• Students are supported in their preparation for diverse career paths
• Positions institution as a leader in area of doctoral student career development | • Some faculty will feel like the intended purpose of the doctorate is being eroded, and that tradition is being degraded |

Appendix E

Interview Questions (Institution A, 2017d)

Introduction: Institution A is trying to get a sense of the needs and goals of our PhD students related to professional development and career goals and prospects. As there has traditionally been a lack of support in many PhD programs for professional development, we are speaking to upper year PhD students. I have some informal questions about your experience in your PhD program that will hopefully help us to understand what has been done well and what has been lacking across campus.

The student

1) What year of studies are you in?

2) What Faculty is your program part of?

3) What work and academic experience did you have before beginning your PhD?
   - Prompt: Did you work? Did you apply straight from a Master's program?)

4) Why made you decide to begin PhD?
   - Prompt: Did you have any specific goals?)

Career goals and expectations

5) What were your career goals when you started the PhD?

   1. Have your career goals changed?
   2. If yes, how have they changed?
   3. If yes, can you explain why they have changed?

6) There are a series of questions and comments that are often made to PhD candidates, including: What do you want to do with your life? When are you going to finish? Don't you want to be a professor? You're never going to get a job anyway.

   1. How do these types of questions make you feel?
   2. Do you feel equipped to answer them?

Skills

7) Were there skills you expected to receive from the PhD?

8) What skills do you think you have gained from the PhD to date?

9) Are there any skills you think you still need to gain?

10) What skills do you think you are missing and cannot gain from your PhD experience?

Professional development

11) How would you describe or define 'Professional Development'?

12) How much time would you say you have spent on 'Professional Development'?

1. As part of your doctoral program?
2. Outside of your doctoral program since you started?

13) Have you accessed any institutional workshops or services outside of your department related to career or professional development?

1. If yes, what are they?
2. If no, what has stopped you from doing so?

14) Are there any services or programs you would like to see created or improved as part of career or professional development for PhD students and candidates at Institution A?

Appendix F

Post-module survey (Institution A, 2017e)

1. What module did you attend?

Using a one (1) to five (5) star scale:

2. Tell us what you thought about your recent module.
    a. The module was well organized.
    b. Content was valuable.
    c. This was a good use of my time.
    d. The presentation was engaging.
    e. The module was enjoyable.
    f. I would recommend this session to others.

3. I feel more prepared to participate in the career engagement process.

4. The assessment tools (looking at skills, interests, personality and values) were valuable for self-reflection.

5. What timeslot on Mondays works best with your schedule for a professional development workshop? (Select all that apply)
    a. 11:30 am – 1:00 pm
    b. 12:00 pm – 1:30 pm
    c. 2:00 pm – 3:30 pm
    d. 3:30 pm – 5:00 pm
    e. Other

6. Do you have any additional comments regarding the module?

Appendix G

Communications Plan

Phase	Audience	Strategies and messages	Channels
Pre-change	Steering Committee	• Selection of academic and service unit representatives, as well as students, to act as change team • Include opinion leaders, as well as conscientious objectors to help shape change initiative, anticipate pushback, and develop programming	• Face-to-face meetings, retreats • E-mail • Google drive
	Provost	• Change is necessary; use external and internal data, including student feedback to build case • Demonstrate how change aligns with strategic plan, supports recruitment and attrition efforts of institution • Follow-up with complete written proposal outlining proposed initiative, expected outcomes, collaborative approach across all units, and specific budget ask	• Face-to-face meeting • Written proposal
Creating the need for change	Associate Deans (Graduate) and Graduate Chairs	• Change is necessary; use internal and external data, including student feedback to set context • Personalize message based on department-specific information; to degree possible, demonstrate where graduates are employed, address any unique recruitment and retention concerns and show role change initiative could play in increasing recruitment and retention • Provide examples of places where similar models of change have succeeded • Clarify what support looks like (i.e., not asking for money, increasing workload of unit staff or Faculty, etc.) • Seek support in influencing Faculty in their departments to support	• Face-to-face meetings

		change	
	Faculty	• Change is necessary; use internal and external data, including student feedback to set context • Anticipate questions and respond accordingly • Demonstrate ways that students are already participating in career preparation activities without detracting from academic responsibilities; underscore that change initiative is, in fact, not a large departure, rather more structured • Provide concrete examples of what their support looks like (i.e., support does not require them to be career development experts or take on greater workload)	• Face-to-face meetings • Departmental meetings
	Students	• Change is necessary; use internal and external data, including student feedback to set context • Situate messages in context of 'we heard you' and we are responding accordingly; students need to see selves as partners in change • Use communication channels to introduce pilot program and invite participation • Develop website and social media campaign to consistently communicate messaging about new program, personal and professional outcomes for participation	• Focus groups • 1:1 interviews • Targeted e-mail • Website • Social media
Midstream change and milestone communication	Provost	• Provide update on change initiative to date, demonstrating uptake in student participation, use student testimonials, and outline next steps	• Written update
	Associate Deans (Graduate) and Graduate Chairs	• Provide faculty/department update on change initiative to date, providing specific participation rates of their units • Continue dialogue about rationale, anticipated benefits of program, as on-boarding will be a continuous process, including as leadership	• E-mail and face-to-face updates

		changes	
	Students	• Further develop and refine promotional campaign • As program rolls out and more participants attend, identify frequently asked questions and post to website and through other communication channels • Focus group to determine what is and isn't working	• Focus groups • Website • Social Media
	Steering Committee	• Reflection on survey feedback collected to date, feedback from program facilitators to assess what is and isn't working • Celebration of launch of pilot • Discussion of next steps and planning for next change cycle	• Retreat
Confirming and celebrating change	Associate Deans (Graduate) and Graduate Chairs	• Reporting on key successes, learnings of first iteration of change cycle, including final participation data for their units • Ongoing dialogue to continue to address concerns, secure support for change	• Written update • Face-to-face meetings
	Students	• Reporting on success of pilot program, establishing next steps for pilot program participants as they enter year two of the program • Convene focus groups of participants to gather additional feedback on pilot for use in next cycle of change • Use student testimonials for recruitment literature and on website for incoming class; demonstrate commitment Institution has made to career development of its students • Create promotional campaign for use during recruitment and at orientation to build awareness of program, encourage participation	• Focus groups • Website • Recruitment literature • Orientation material