8-12-2020

Interdisciplinary explorations: Setting the stage for change through understanding culture and attending to psychological safety in an Ontario Community College

Louise Chatterton  
Western University, lchatte@uwo.ca

Follow this and additional works at: https://ir.lib.uwo.ca/oip

Part of the Community College Education Administration Commons, Community College Leadership Commons, Educational Leadership Commons, Higher Education Commons, and the Higher Education Administration Commons

Recommended Citation
Chatterton, L. (2020). Interdisciplinary explorations: Setting the stage for change through understanding culture and attending to psychological safety in an Ontario Community College. The Organizational Improvement Plan at Western University, 139. Retrieved from https://ir.lib.uwo.ca/oip/139

This OIP is brought to you for free and open access by the Education Faculty at Scholarship@Western. It has been accepted for inclusion in The Organizational Improvement Plan at Western University by an authorized administrator of Scholarship@Western. For more information, please contact wlsadmin@uwo.ca.
Abstract

Central to this Organizational Improvement Plan is the desire to close the gap between a curriculum that is disciplinary-centric to one that is more interdisciplinary. This change will better prepare college graduates for the future skills required in the workplace where increasingly complex problems require interdisciplinary solutions. While this may, at first, appear to be solely about the curriculum, the problem is that moving from a disciplinary to an interdisciplinary mindset involves disturbing deeply rooted disciplinary boundaries and, in turn, challenging faculty identities. In order to influence the culture of College X towards interdisciplinarity, the cultural context of the institution – as well as of the disciplinary subcultures – will need to be considered. Interdisciplinarity aligns with key priorities identified in the current Strategic Plan of College X and is congruent with the mission and values of the institution. Schein’s (2017) cultural theory provides the theoretical framework for this second-order change. Schein’s (2017) work provides a model for change that attends to psychological safety which is critical when perceptions, values and beliefs are challenged. One of the main tools proposed for creating change is the Community of Transformation model, under the auspices of the Teaching and Learning Centre, augmented by reviewing and rebranding the activities in the Innovation Centre and Applied Research to be more explicitly interdisciplinary. Adaptive and distributed leadership approaches respect the organizational context at College X which values collaboration and consultation and, therefore, provide the leadership framework. Finally, this Organizational Improvement Plan draws upon sensemaking activities in order to ensure effective communication to various stakeholders as they navigate the change proposed at College X.

Keywords: Interdisciplinarity, psychological safety, Ontario community colleges, cultural theory, adaptive leadership, distributed leadership
Executive Summary

Research points to the fact that increasingly complex problems require interdisciplinary solutions (Busch, 2017; Buller, 2015; Strober, 2011; Dailey-Hebert & Dennis, 2015: Spelt, Biemans, Tobi, Luning & Mulder, 2009) and that employers are looking for a workforce with strong collaboration and teamwork, problem-solving and communication skills (Royal Bank of Canada, 2018; Conference Board of Canada, nd; The Economist Intelligence Unit, 2015; QS Intelligence Survey, 2018; Canadian Chamber of Commerce, 2018). Yet many employers are not satisfied with the current level of skills exhibited by their new employees (The Economist Intelligence Unit, 2015; QS Intelligence Unit, 2018; Mourshed, Farrell, & Barton, 2013).

Knowing that Ontario community colleges have a mandate to offer career-oriented education and training that leads to employment for the graduate, meets the needs of employers, and addresses the economic and social development of the local community (MTCU, 2009) means that community colleges need to take a new approach. Furthermore, College X has made an aspirational claim in its most recent Strategic Plan that they “will be a leader offering the educational experiences students need now and into the future” (College X Strategic Plan, 2019). There is an identified gap and interdisciplinarity can provide an evidence-based means of preparing career-ready graduates.

Students at College X (much like students at most Ontario community colleges) do not have the opportunity to explore interdisciplinarity during the completion of their credential. College X does a comprehensive job of teaching disciplinary skills; however, the desired end state is to also provide opportunities for students to explore interdisciplinary approaches that enhance skills in the areas of critical thinking, creativity, communication, collaboration, and problem-solving. At first glance, addressing this Problem of Practice may appear to be a matter
INTERDISCIPLINARY EXPLORATIONS

of curriculum. However, this second-order change disrupts disciplinary boundaries and challenges faculty identities and disciplinary-influenced mindsets. It requires influencing values, perceptions, and beliefs. Accordingly, a change path is needed that analyzes and aligns with the culture of College X, considers the human implications of change (Buller, 2015), and creates psychological safety (Schein, 2017).

The theoretical framework, which provides the lens for this change initiative, is cultural theory (Schein, 2017). Through the lens of cultural theory, an understanding is gained about both the how and what to change. Adaptive leadership (Heifetz & Laurie, 1997) and distributed leadership (Gronn, 2002) provide the leadership framework for creating the trust and buy-in necessary for faculty to engage in interdisciplinary conversations where their values, perceptions, and mindsets will be challenged. As a result of attending to psychological safety and the cultural milieu, the foundation is then built for faculty to explore interdisciplinary options for their students. (However, the actual implementation is beyond the scope of this OIP.)

It is important to recognize that College X is not bicameral and ultimately decisions (including academic decisions) are made by administration. Therefore, despite the cultural expectation of consultation and collaboration at College X, there is a limiting factor and that is the overall bureaucratic governance structure of Ontario community colleges. Even so, adaptive leadership and distributed leadership work with College X’s culture by respecting people’s voices. Top down leadership approaches would not be culturally responsive but both adaptive and distributed leadership contribute to the goal of attending to psychological safety.

To set the stage for change, through understanding culture and attending to psychological safety, four possible solutions are presented in Chapter Two. However, only one (“The Integrated Approach”) is recommended. This particular solution balances resource costs with a
sufficiently comprehensive strategy to attend to psychological safety, develop a shared vision, provide rewards and incentives, and connect to recognized structures on campus. The integrated approach involves the incorporation of interdisciplinarity into the activities of three different departments: the Teaching and Learning Centre, Applied Research Department, and the Innovation Centre.

Organized around Schein’s (2017) three stages of change, the change implementation plan in Chapter Three outlines short-, medium- and longer-term goals that encompass an awareness-raising strategy, data collection and knowledge mobilization plan, a Community of Transformation experience, interdisciplinary applied research projects, and innovation centre activities. Monitoring and evaluating these goals also follows the cultural theoretical framework, particularly focused on Schein’s (2017) eight activities for creating psychological safety. Finally, Chapter Three examines the communication strategy and the customization of the message and communication vehicles to each stakeholder with a focus on taking a sensemaking approach to communication (Kezar, 2018).

Fundamentally, this OIP requires dislodging beliefs and assumptions about teaching and learning as well as the construction of knowledge – both influenced by a disciplinary identity. Required in its place is an ability to engage constructively with people from other disciplines to harness the strengths of various disciplinary knowledge in order to create new solutions to complex problems. Outcomes for students include enhanced critical thinking, creativity, communication, collaboration, and problem-solving skills. The limitations of a sole disciplinary approach needs to be consciously raised and discussed within a psychologically safe space so that people can more comfortably engage with the disciplinary approaches of others and discover new solutions that were not possible from a mono-discipline perspective.
Acknowledgements

Thank you to my Mum who instilled in me a love of learning and whose own educational journey made an early impression on me. I am proud of her accomplishment as a graduate of Cambridge University at a time when females (especially those from lower socioeconomic backgrounds) did not typically attend university let alone such a prestigious institution. It was her intelligence, intellectual curiosity, and tenacity that got her there and got her through. I was always proud to know that about her. In completing my EdD, I want to recognize and honour her accomplishment. To my children, I want to be an inspiration and encouragement to them to keep working hard towards their own individual dreams. The EdD process was definitely one of self-discovery. In the midst of the hard work, self-doubt, and moments of feeling overwhelmed, my passion for learning, thinking, reflecting, and synthesizing ideas was affirmed. Thank you to my colearners and professors for what you added to my learning journey. Specifically, I would like to thank Dr. Cheryl Bauman-Buffone for her ongoing support. Finally, thank you to my dear friends (you know who you are) who believed in me, cheered me on, and shared in this process.
Table of Contents

Abstract .............................................................................................................................................. ii

Executive Summary ...................................................................................................................... iii

Acknowledgements ..................................................................................................................... vi

Table of Contents ......................................................................................................................... vii

List of Tables ................................................................................................................................... xi

List of Figures .................................................................................................................................. xii

Acronyms and Glossary ............................................................................................................... xiii

Acronyms ........................................................................................................................................ xiii

Glossary .......................................................................................................................................... xiii

Chapter 1: Introduction and Problem ............................................................................................ 1

Organizational Context .................................................................................................................. 3

Introduction and contexts .............................................................................................................. 3

Vision, mission, values, purpose, and goals. .............................................................................. 7

Short history of the organization .................................................................................................. 9

Leadership Position and Lens Statement ....................................................................................... 10

Leader’s personal position ............................................................................................................. 10

Theoretical lens to leadership practice ......................................................................................... 12

Leadership Problem of Practice .................................................................................................. 14

Framing the Problem of Practice .................................................................................................. 15
Key organizational theories and frameworks. .......................................................... 15

Relevant external data............................................................................................... 18

Recent literature on interdisciplinarity and interdisciplinary teaching and learning. 20

Guiding Questions Emerging from the Problem of Practice ................................. 23

Question 1: How does interdisciplinarity align with identified College X priorities?
.......................................................................................................................................... 23

Question 2: What approaches fit with the observed culture at College X and how can
this be translated into strategies to inspire others to think differently? ....................... 24

Question 3: What are the key ingredients for creating psychological safety (Schein,
2017) to support disruptive interdisciplinary explorations? ........................................ 24

Leadership-Focused Vision for Change................................................................. 25

How the future state improves the situation. ......................................................... 25

Priorities for change. ............................................................................................... 26

Change drivers. ........................................................................................................ 27

Organizational Change Readiness............................................................................. 28

Tools for analyzing organizational change readiness. ........................................... 28

Address competing internal and external forces that shape change. ...................... 32

Chapter 1: Concluding Thoughts ........................................................................... 33

Chapter 2: Planning and Development .................................................................. 34

Leadership Approaches to Change......................................................................... 34
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive leadership.</td>
<td>35</td>
</tr>
<tr>
<td>Distributed leadership.</td>
<td>37</td>
</tr>
<tr>
<td>Framework for Leading the Change Process</td>
<td>40</td>
</tr>
<tr>
<td>The stages and cycle of learning/change.</td>
<td>40</td>
</tr>
<tr>
<td>Critical Organizational Analysis</td>
<td>45</td>
</tr>
<tr>
<td>What to change: Schein (2017).</td>
<td>45</td>
</tr>
<tr>
<td>What to change: Kezar (2018).</td>
<td>46</td>
</tr>
<tr>
<td>What to change: Bolman and Deal (2017).</td>
<td>48</td>
</tr>
<tr>
<td>Possible Solutions to Address the Problem of Practice</td>
<td>52</td>
</tr>
<tr>
<td>Possible solution one: the organic approach</td>
<td>52</td>
</tr>
<tr>
<td>Possible solution two: the awareness campaign.</td>
<td>54</td>
</tr>
<tr>
<td>Possible solution three: the integrated approach.</td>
<td>56</td>
</tr>
<tr>
<td>Possible solution four: the whole college approach</td>
<td>61</td>
</tr>
<tr>
<td>Leadership Ethics and Organizational Change</td>
<td>63</td>
</tr>
<tr>
<td>Ethical priorities</td>
<td>64</td>
</tr>
<tr>
<td>Ethical process</td>
<td>65</td>
</tr>
<tr>
<td>Chapter 2 Concluding Thoughts</td>
<td>67</td>
</tr>
<tr>
<td>Chapter 3 – Implementation, Evaluation and Communication</td>
<td>69</td>
</tr>
<tr>
<td>Change Implementation Plan</td>
<td>69</td>
</tr>
<tr>
<td>Understanding stakeholder reactions to change.</td>
<td>70</td>
</tr>
</tbody>
</table>
List of Tables

Table 1 Schein’s (2017) Three Levels of Culture Applied to College X ..................... 16
Table 2 Identifying Themes of Change ........................................................................ 50
Table 3 Resources Required for Possible Solution 2 .................................................. 55
Table 4 Resources Required for Possible Solution 3 .................................................. 60
Table 5 Resources Required for Possible Solution 4 .................................................. 62
Table 6 Change Implementation Process ..................................................................... 74
Table 7 Summary of Monitoring and Evaluation Plan ................................................ 80
Table 8 Customizing the Message and the Communication Vehicle to the Stakeholder . 88
List of Figures

Figure 1: A conceptual framework depicting the relationship between cultural theory, as the overarching theoretical lens, and adaptive and distributed leadership with the desired end state of interdisciplinary approaches in teaching and learning through the changing of perceptions, values and beliefs. ........................................................................................................................................... 2

Figure 2: Principles of ethical leadership (adapted from Northouse, 2016) in relation to the Problem of Practice ........................................................................................................................................... 66
Acronyms and Glossary

Acronyms

AMM – Academic Middle Manager
COT – Community of Transformation
OIP – Organizational Improvement Plan
POP – Problem of Practice
SOTL – Scholarship of Teaching and Learning

Glossary

Bureaucracy – the organizational and governance structure in Ontario community colleges where academic and administrative decisions are made by administrators to meet organizational goals and governmental accountability requirements as compared to bicameral institutions (for example, universities) where a Senate is responsible for academic decisions and a Board is responsible for administrative decisions.

Collegial – describes a more decentralized and participative decision-making organizational and governance structure where faculty have greater autonomy for academic matters.

Community of Transformation – a professional learning community that encourages innovative new approaches to learning within higher education (Kezar, Gehrke & Bernstein-Sierra, 2018).

Interdisciplinarity (noun) – an approach to solving complex, real world problems by integrating concepts, methodologies, terminology and ways of knowing and seeing from more than one discipline.
**Interdisciplinary** (adjective) – describing an approach that solves complex, real world problems by integrating concepts, methodologies, terminology and ways of knowing and seeing from more than one discipline.

**Neoliberalism** – the application of a market-focused socioeconomic theory to higher education that focuses on the corporatization of practices and the commodification of goods.

**Psychological safety** – a belief that it is safe to engage in cultural change through the intentional activities of a change agent to minimize learning anxiety (Schein, 2017).
Chapter 1: Introduction and Problem

Central to this Organizational Improvement Plan (OIP) is the desire to close the gap between a curriculum that is disciplinary-centric to one that is more interdisciplinary and will better prepare college graduates for the future skills required in the workplace. This may, at first, appear to be solely about the curriculum. However, due to the complexity of creating transformative change, an interdisciplinary conversation about how to move forward with interdisciplinarity is necessary. Multiple perspectives will need to be considered and multiple mindsets integrated, which has the potential to be an unsettling experience. Consequently, tending to the psychological safety of stakeholders is paramount to the success of the change implementation process (Schein, 2017). The theoretical framework for this change initiative is cultural theory (Schein, 2017) which provides an overarching lens (as shown in Figure 1) for understanding and navigating the required change. Furthermore, a leadership lens that borrows elements from adaptive leadership (Heifetz & Laurie, 1997) and distributed leadership (Gronn, 2002) provides a change path for managing this second-order change within a psychological safe environment. By integrating cultural theory with adaptive and distributed leadership approaches, the foundation is set for changing mindsets, values and perceptions from a disciplinary to an interdisciplinary orientation. Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.

Figure 1, on the next page, provides a visual roadmap for this Organizational Improvement Plan proposed by the author, referred throughout as the “change agent”.
Figure 1. A conceptual framework depicting the relationship between cultural theory, as the overarching theoretical lens, and adaptive and distributed leadership with the desired end state of interdisciplinary approaches in teaching and learning through the changing of perceptions, values and beliefs in a psychologically safe environment.

This conceptual framework is woven throughout all three chapters of the Organizational Improvement Plan highlighting the various components and their interrelatedness in managing a second-order change initiative.
Organizational Context

Introduction and contexts.

Several macro factors influence the Problem of Practice faced at College X. Firstly, there is the neoliberal economic driver expressed by the labour market’s demands. Reports identify the need for a future workforce with strong collaboration and teamwork, problem-solving and communication skills (Royal Bank of Canada, 2018; Conference Board of Canada, nd; The Economist Intelligence Unit, 2015; QS Intelligence Survey, 2018; Canadian Chamber of Commerce, 2018). Despite the call for these skills, employers are not satisfied with the current level of skills exhibited by new employees (The Economist Intelligence Unit, 2015; QS Intelligence Unit, 2018; Mourshed, Farrell, & Barton, 2013). This signals the need for a different approach from community colleges – especially in light of the mandate of Ontario colleges to offer career-oriented education and training that leads to employment for the graduate and meets the needs of employers as well as addresses the economic and social development of the local community (MTCU, 2009). College X needs to grapple with how to offer career-oriented education and training in light of employer dissatisfaction.

Another macro influence is the legislative driver contained in the 2009 Ministry of Training, Colleges and Universities (MTCU) Framework for the Program of Instruction which identifies the importance of employability skills such as collaboration and teamwork. However, the Ministry’s orientation towards collaboration and teamwork is on “respecting diverse opinions, interacting with others in groups and contributing to the achievement of team goals” (2009, p. 13) which is more generic in nature than what is required for interdisciplinarity. This MTCU mandate provides an interesting macro-level tension in that the Ontario community college system was designed to meet the economic and social development needs of local
communities as identified above (MTCU, 2009). In other words, community colleges are intentionally meant to have a market focus – one of the tenets of neoliberalism (Busch, 2017; Cannella & Koro-Ljungberg, 2017; Saunders, 2007). The change agent must have an awareness of the growing neoliberal tendency in higher education to operate according to business principles which will have an influence on the Problem of Practice. Namely, an increased focus on revenue generation, the growing autonomy of administrators, intensified reporting and quality assurance requirements, along with consumer-focused curriculum choices, and a focus on the student as customer purchasing a product (Busch, 2017; Cannella & Koro-Ljungberg, 2017; Saunders & Blanco Ramirez, 2016; Saunders, 2007).

At the meso level, there is increased competition between Ontario postsecondary educational institutions (Jafar, 2015). Higher education institutions are looking for their unique value proposition to attract students so addressing this Problem of Practice could provide the differentiating (albeit neoliberal) recruitment factor for College X. Also for consideration at the meso level is the governance structure of College X (with regards to being bureaucratic with collegial tendencies). In the Ontario college system, faculty do not have primary decision-making authority in academic matters. There is not a parallel governance structure to the university Senate. However, at College X there is a strong cultural value for consultation and this expectation will shape the OIP approach – discussed in further detail later in this chapter. There is an inherent conflict between the organizational cultural expectation and the reality of the governance structure of Ontario community colleges. This tension will need to be considered by the change agent and, potentially, will influence the timelines as suggested by the Schein (2017) change model. Analysis of the requisite stakeholders who need to be consulted and/or informed will be an important detail to consider.
Finally, at the micro level, disciplinary affiliations, shape faculty members’ perceptions of their roles, priorities, knowledge constructions and so forth (Kezar, 2018; Strober, 2011). Disciplinary ways of knowing and being vary from discipline to discipline and interdisciplinary practice creates multiple points of contact where these, sometimes unconscious, perceptions can come into conflict. This will be a major consideration for change within the proposed Organizational Improvement Plan.

Throughout this Organizational Improvement Plan there are numerous references to the cultural context at College X. Cultural theory (Schein, 2017) provides the lens for understanding how and what to change. Organizational culture is an amorphous concept so it is important to define within the context of this OIP. According to Schein (2017), organizational culture is behavioural, cognitive and emotional and involves the basic assumptions developed amongst a group with a shared history as they deal with problems of adaptation and integration. In other words, culture describes how a group collectively thinks, acts and responds and how they mold incoming members to think and act. Culture influences mission, strategy, structure and procedures (Schein, 2017) and therefore, it is necessary to understand the influences at play at College X.

What is important for the cultural analysis required in this OIP is to consider both the culture of College X and the subcultures represented by the various disciplines participating in interdisciplinary explorations (Kezar, 2018). While not all groups have cultures, Schein (2017) addresses that occupations can have cultures:

If there is strong socialization during the education and training period and if the beliefs and values learned during this time remain stale as taken-for-granted assumptions even though the person may not be in a group of occupational peers, then clearly those occupations have cultures. (p. 13)
While not all disciplines are as structured as defined above, the term “discipline” could be inserted for “occupation” in cases where a discipline has published standards of practice, codes of ethics or other formalized documentation to guide their practices. Lattuca (2002) also identifies the cultural tools of disciplines (like assumptions, perceptions, language, values) that shape people’s thinking and are taught to members of the group. Disciplinary cultural tools are, therefore, an important consideration with interdisciplinarity. However, it will not be possible to fully preanalyze the subcultures because there will be different disciplines represented depending on the interdisciplinary projects that move forward. Even so, exploring the cultural dimensions of disciplines will be an important activity to build into the possible solutions and the adoption of a new interdisciplinary culture.

Schein discusses three levels of culture:

1. artefacts – what is observable (seen, heard or felt) by watching a new group;
2. beliefs and values – ideals, values and goals that become shared after the group experiences success through their collective activity; and
3. basic underlying assumptions – the most difficult to change because they are unconsciously followed by the group (Schein, 2017, p. 18).

The application of each of these three levels of culture to College X can be found in Table 1 in the subsequent section entitled “Key organizational theories and frameworks.” However, cultural references are also topical in discussion of the vision, mission, values, purposes and goals of College X as described in the following section.
Vision, mission, values, purpose, and goals.

In May 2019, College X’s new Strategic Plan was launched and much about the culture of the college can be gleaned from details in this document. Deconstructing the Strategic Plan – both the final document and the process of developing it – illuminate the shared beliefs and values that partially shape the culture at College X. The consultation process involved over 1,400 people (faculty, staff, students, alumni and community members), a fact that was widely and proudly shared during the launch phase of the new Plan (College X Strategic Plan website, 2019). This is an important cultural clue about the importance of consultation and collaboration at College X. A review of the College’s stated values illuminates the culture at College X. Four of the five values from the previous Strategic Plan (2014-2019) were retained in the new Strategic Plan: Students First, Teamwork, Innovation and Integrity (College X Strategic Plan, 2019). After much consultation, faculty, staff, students, alumni and community partners affirmed that these words still expressed the shared cultural values. However, during the consultation for the new strategic plan, a fifth value of Belonging was added with a declaration that:

We believe honesty, inclusivity and accountability are the pathways to success. As our communities evolve, we look to create a sense of belonging for our students, team, and partners. We celebrate diversity, respect our differences, value contributions, and foster an environment where everyone feels they can participate without discrimination in our College community. (College X Strategic Plan, 2019)

These five values are prominently displayed as artefacts around the College campuses in permanent installations and on television screens.

It is, therefore, significant that all five values (College X Strategic Plan, 2019) are congruent with the proposed approach to this OIP. For example, ensuring that students have the opportunity for interdisciplinary experiences to prepare them for workplace realities exhibits the Students First value. Supporting the skills and knowledge the team needs to deliver excellence,
by providing faculty development specific to interdisciplinary approaches to teaching and learning, supports the Teamwork value. Furthermore, employing a Community of Transformation (COT) approach (see Chapters Two and Three) models the Innovation value. Demonstrating Integrity is fulfilled through taking an evidence-based action approach to this OIP. Finally, the value of Belonging is furthered by taking an adaptive as well as a distributed leadership approach where diverse contributions are sought out and protected.

Two key elements of the College’s Mission include “delivering innovative learning opportunities” and “preparing career-ready graduates to be leaders in their fields” (College X Strategic Plan, 2019). This language prepares the way for a new approach at College X with interdisciplinarity positioned as an innovative, evidence-based means of preparing career-ready graduates. Elsewhere in the new Strategic Plan (within the four Strategic Directions), a further connection to this OIP can be found. Specifically, the pillar “Our Programs” states that:

We will be a leader offering the educational experiences students need now and into the future. Our programming is the foundation we offer to our students. Ensuring the right mixture and balance of programming is central to the College’s continued sustainability. We know that we must be agile in adapting to external factors such as the rapid advancement of technology as well as economic and labour market trends. We are committed to providing top quality programming now and well into the future (College X Strategic Plan, 2019).

Drilling down further, the allied multiyear objective of “Academic Excellence” points to a commitment to enhancing what is currently offered at College X in order to best prepare career-ready graduates (College X Strategic Plan, 2019).

Therefore, the Problem of Practice needs to be addressed in light of the above. Overall, the College X Strategic Plan provides a compass for this Organizational Improvement Plan. It will be particularly important, when seeking senior executive team support, to demonstrate how interdisciplinarity aligns with the College’s mission, established values and integrates with
identified strategic objectives. The change agent will need to assess if, and how, the language of the mission, values, strategic objectives is as relevant to other stakeholders – particularly with faculty. Regardless, in terms of the change path, success will be improved by heeding the cultural cues of consultation, collaboration and the College’s five values, strategic directions and multiyear objectives. Additionally, the context for change needs to consider the history of the organization which is outlined in the following section.

**Short history of the organization.**

College X was established in 1967 and, similar to other higher education institutions, College X’s programs are organized by discipline and bundled into specific Schools. The Ontario community college system is not bicameral (like the university system) and each College operates under a bureaucratic governance structure where academic decision-making authority rests with administration. Thereby, operating under a more neoliberal framework. Within this reality, however, College X’s institutional culture is highly consultative and input from all employees – faculty and staff – is sought after to inform decision-making. As such, it is neither purely bureaucratic nor fully collegial. This is another cultural cue that needs to be heeded.

College X is a publicly funded community college with three campuses found in small- to medium-sized urban centres within a rural catchment area. While all campuses offer full services, one campus is significantly larger than the others (Campus A has approximately 5,000 full-time students; Campus B has approximately 1,000 full-time students; and Campus C has approximately 1,300 full-time students). The credential mix includes local board approved certificates, diplomas, advanced diplomas, graduate certificates and bachelor degrees plus apprenticeship programs. On the largest campus, there are two academic divisions (referred to as “Faculty”), further subdivided into Schools. One Faculty has three Schools while the other has
four Schools. Each Faculty is headed by a Dean (and the other smaller campuses are led by a Campus Dean). Each School is led by an Associate Dean who oversees a program mix of typically eight to 10 related programs. The Associate Dean has responsibility for providing academic leadership for these programs. This includes overseeing the teaching and learning processes, compliance with regulatory bodies with regards to program delivery, the quality assurance of the curriculum and new program development to address community and labour force needs. The Associate Dean is also responsible for student appeals, academic code of conduct matters (such as academic integrity) and overall student success. The change agent is currently an Associate Dean at College X.

The byproduct of this organizational structure is a fragmented, siloed system. For instance, cyclic review of curriculum is organized by program, in isolation of other programs. Professors are rarely cross-appointed and teach only within their assigned program area. There are minimal occasions when faculty from different programs within a single School interact and even fewer opportunities for faculty from different Schools or campuses to come together. A siloed system and a need to be highly collaborative and consultative work against each other and represent a challenge to addressing this Problem of Practice. The change agent, as an academic middle manager, will need to strategically think through how to engage those above and below (Kezar, 2018) in order to create collaborative opportunities, the topic of the next section of this chapter.

**Leadership Position and Lens Statement**

**Leader’s personal position.**

As a middle manager, the change agent will require top-down leadership approaches (as the academic administrator responsible for decision-making) as well as bottom-up leadership (in
order to influence senior academic leadership to provide resources and a mandate for the rollout of interdisciplinary solutions across the College) (Kezar, 2018). There is an intensity and uniqueness of navigating the expectations of both faculty and those of senior management (Rudhumbu, 2015) when it comes to Academic Middle Managers (AMM) implementing curriculum change in higher education institutions. Rudhumbu (2015) points to the importance of clarity from the senior management team about the AMM’s role and the context provided with regards to expectations. Accordingly, the implementation of an interdisciplinary framework at College X will require the buy-in from the senior leadership in the academic division which will be boosted by demonstrating how interdisciplinarity addresses the priorities identified in the Strategic Plan related to preparing learners for the skills needed now and in the future (College X Strategic Plan, 2019).

Rudhumbu (2015) points out that the AMM is strategically positioned to make change happen because they have both a big picture, institution-wide understanding as well as an understanding of the operational realities. This means the AMM can interpret and transfer knowledge from senior management to the front lines in meaningful ways and the AMM is close enough to the front lines to be able to leverage networks and informal channels to move ideas forward. The role of the AMM also is to communicate to senior managers about the operational realities that will shape the success of change plans, a discussion point in Chapter Three. Rudhumbu’s (2015) analysis translates to College X and the change agent as an AMM will need to be mindful of the duality of the role and determine how to be a conduit. In addition, this OIP will require the change agent to influence peers overseeing other Schools and Departments in order to engage their faculty and teams. Part of the strategy for doing this well will draw from adaptive and distributed leadership approaches, to be explored in the next section.
Theoretical lens to leadership practice.

As depicted in Figure 1, the overarching theoretical lens for addressing the articulated Problem of Practice is cultural theory (Schein, 2017). Cultural theory provides a diagnostic tool for understanding the organizational context as well as introducing a concept that is central to this OIP: psychological safety. As described in Chapters Two and Three, creating psychological safety is a requisite activity for change in Schein’s (2017) model. It is through psychological safety that the person or group that must change “[comes] to feel that it is possible and in its own interest” (Schein, 2017, p. 328). Without creating psychological safety, the tensions of integrating different disciplinary ways will be more difficult to explore. Conversely, following Schein’s (2017) recommended eight activities for tending to psychological safety provides a road map for successful change.

Figure 1 also demonstrates that the leadership theories of adaptive leadership (Heifetz & Laurie, 1997) and distributed leadership (Gronn, 2002) fall under overarching theoretical framework of cultural theory. According to Strober (2011), “effective leadership is the single most important ingredient for creating successful interdisciplinary conversations” (p. 117). Strober (2011) emphasizes the challenge of assisting faculty members with strong disciplinary identities (and established, disciplinary-influenced ways of knowing and being) to engage with one another constructively. Successful change leadership depends on considering the human implications of change (Buller, 2015). Adaptive leadership (Heifetz & Laurie, 1997) integrated with lessons from distributed leadership (Gronn, 2002) provides a map for creating the trust and buy-in necessary for faculty to more comfortably engage in interdisciplinary conversations. This is the vital precursor to implementing interdisciplinary approaches to teaching and learning. From there, the foundation is built for faculty to explore interdisciplinary options for their
students which, in turn, will build the resilient competencies students require for long term success in the workplace.

Adaptive leadership (Heifetz & Laurie, 1997) focuses on preparing and encouraging people to change. Adaptive leadership concentrates on challenges or problems that are not clear cut and cannot be solved solely by the leader’s authority or expertise or through the normal ways of doing things in the organization. Adaptive challenges – as opposed to technical challenges – require changing attitudes, values and behaviours, which is an apt description of the situation when moving from a disciplinary to an interdisciplinary mindset. Introducing interprofessional education fits with adaptive leadership for a number of reasons: there is a requisite change for faculty and it is a value-laden change with the potential to disturb emotions due to a sense of loss. Heifetz and Linsky (2002) are quoted as stating, “To lead is to live dangerously because when leadership counts, when you lead people through difficult change, you challenge what people hold dear – their daily habits, tools, loyalties, and ways of thinking” (as cited in Daft, 2008, p.373). In other words, all of the above indicates that leadership in the context of this Problem of Practice will mean challenging the espoused values and beliefs as well as basic underlying assumptions (Schein, 2017) and an adaptive leadership approach will help the change agent and College X stakeholders to navigate the necessary changes to these foundational beliefs. Chapter Two will explore in detail the application of the six leadership behaviours involved in adaptive leadership.

Chapter Two will also explore distributed leadership in more depth which “accentuates the collective dynamics of leadership rather than focusing on the actions and beliefs of appointed leaders” (Vuori, 2019). While there is no standardized definition of distributed leadership (Thorpe, Gold & Lawler, 2011) and limited research overall (Floyd & Fung, 2017), the collective
nature of this leadership approach fits well with the Problem of Practice and the realities of College X’s culture. The successful integration of interdisciplinary education requires shared ownership by faculty and academic administration due to the very nature of interdisciplinarity. Taking a distributed approach – which considers the perspectives and contributions of multiple stakeholders – mirrors the outcomes of interdisciplinary work. Taking a distributed approach also aligns with the values and culture of College X where there is a practice and expectation of collaboration and consultation. If adaptive leadership and distributed leadership provide leadership perspectives for approaching the change process, it is important to connect these leadership practices to the specific Problem of Practice at College X and the changes required with regards to interdisciplinarity. Accordingly, the next section spells out the leadership Problem of Practice.

**Leadership Problem of Practice**

Higher education institutions need to respond to the fact that increasingly complex problems require interdisciplinary solutions (Busch, 2017; Buller, 2015; Strober, 2011; Dailey-Hebert & Dennis, 2015; Spelt, Biemans, Tobi, Luning & Mulder, 2009). The Problem of Practice (POP) is that, while a mid-sized Ontario community college (College X) graduates students with strong disciplinary knowledge, students have limited opportunities for interdisciplinary experiences during their academic program. Interdisciplinary explorations would provide purposeful opportunities for students to extend their learning beyond the borders of a single discipline and provide opportunities to gain essential skills that employers identify they need – like problem-solving, collaboration, critical thinking, creativity, and communication – but have found lacking. The problem is, however, that moving from a disciplinary- to an interdisciplinary-focused approach, involves disturbing deeply rooted disciplinary boundaries and, in turn,
challenges faculty identities. Key to this Problem of Practice will be creating psychological safety to support people as they adapt their values, perceptions and beliefs in order to create interdisciplinary learning that more closely models the situations that will be required of students upon graduation.

**Framing the Problem of Practice**

**Key organizational theories and frameworks.**

As mentioned already, the theoretical framework for addressing this Problem of Practice is cultural theory (Schein, 2017) which was introduced earlier in this chapter and more fully applied here to the organizational context of College X. This is a key step as:

Understanding the institutional culture is critical to avoid barriers and navigate progress forward, as well as to use as a lever for creating changes. Cultural theories of change [emphasize] the need to analyze and be cognizant of underlying systems of meaning, assumptions and values that are often not directly articulated, but shape institutional operations and can prevent or facilitate change. (Kezar, 2018, p. 123)

Understanding the cultural DNA (Schein, 2017) is, therefore, an important undertaking for the change agent, especially considering that culture provides “stability, meaning and predictability” (Schein, 2017, p.10). Having already identified that this Problem of Practice involves disrupting disciplinary identities, it is also important to identify the cultural DNA of College X in order to minimize further disruption from challenging basic assumptions.

Recalling that Schein (2017) identifies three levels of culture – artefacts, beliefs and values as well as basic underlying assumptions – the following table (Table 1) outlines what can be learned about College X’s organizational culture by applying a cultural lens.
Table 1

*Schein’s (2017) Three Levels of Culture Applied to College X*

<table>
<thead>
<tr>
<th>1. Artefacts</th>
<th>Description: what can be seen, heard or felt from observing a new group (Schein, 2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• College X President frequently visits faculty and staff in their offices and stops to talk to them in the hallway (typically on a first name basis).</td>
<td></td>
</tr>
<tr>
<td>• President visits classes and participates in student learning as invited by faculty as part of a #gotoclass initiative.</td>
<td></td>
</tr>
<tr>
<td>• “College Conversations” are held several times a year on each campus to provide College updates from the President and more recently have included a question and answer period where faculty/staff can submit a question for the President to answer in that forum.</td>
<td></td>
</tr>
<tr>
<td>• President and many senior executive team members are active on Twitter (and tweet a mixture of personal and professional content such as college events and news but also with regards to fitness/wellness and family activities).</td>
<td></td>
</tr>
<tr>
<td>• The senior executive team is often in casual dress.</td>
<td></td>
</tr>
<tr>
<td>• There is levity in college meetings.</td>
<td></td>
</tr>
<tr>
<td>• There are intentional celebrations of milestones such as years of service awards, merit-based awards, faculty/staff/student accomplishments and retirements.</td>
<td></td>
</tr>
</tbody>
</table>

Key considerations for this Organizational Improvement Plan:

• Celebrations, informality, accessibility of the senior team are important at College X.
• Do faculty respond to artefacts in the same way that academic administrators do? Does the language of the mission, values and strategic objectives inform the work of faculty in the same way?
• Input is sought from College employees.

<table>
<thead>
<tr>
<th>2. Beliefs and values</th>
<th>Description: ideals, values, goals that become shared after the group experiences success through their collective activity (Schein, 2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The five College X values are prominently displayed around the College.</td>
<td></td>
</tr>
<tr>
<td>• Successes from the previous Strategic Plan (the first under the current President) included multiple successes that were celebrated as a community, such as: 25 new online courses, three new online modules, four new online programs and 48 new hybrid courses; and, an increase in the number of students involved in experiential learning (College X video, 2019).</td>
<td></td>
</tr>
<tr>
<td>• Four out of five college employees are highly engaged (College X Engagement Survey, 2019) indicating that the mission, vision and values of the organization are ones that faculty and staff show a commitment towards.</td>
<td></td>
</tr>
</tbody>
</table>
Key considerations for this Organizational Improvement Plan:

- The successes of the first Strategic Plan provide a foundation for the new Strategic Plan and this OIP is connected to several initiatives embedded in the new Plan; however, with increasing turnover, newer staff will not have the same sense of past success.
- It is also important to heed Schein (2017): “So in analyzing espoused beliefs and values, you must discriminate carefully among those that are congruent with the underlying assumptions…and those that are rationalizations or only aspirations for the future” (p. 21). It is, therefore, important to recognize areas of potential cynicism such as a faculty perception that the Students First value disempowers them by siding with students.
- Faculty and staff are engaged and will continue to expect to be engaged.

Table 1 addresses the importance that Schein (2017) places on cultural analysis with regards to beliefs, values and assumptions. Similarly, Kezar (2018) states that successful change requires the change agent to “be cognizant of underlying systems of meaning, assumptions and values that are often not directly articulated” (Kezar, 2018, p. 123). The proposed change at College X is an example of second-order change because major adjustments to faculty’s underlying values, beliefs and principles will be required as they move away from a purely disciplinary way of thinking to one that is interdisciplinary. In essence, it is the creation of a new and distinct culture.

<table>
<thead>
<tr>
<th>3. Basic underlying assumptions</th>
<th>Description: these are the most difficult to change because they are unconsciously followed by the group (Schein, 2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- The change agent is a 10 year employee at College X and, therefore, not a neutral observer.</td>
<td></td>
</tr>
<tr>
<td>- There is a strong, yet unspoken, expectation for collaboration and consultation on all college initiatives.</td>
<td></td>
</tr>
</tbody>
</table>

Key considerations for this Organizational Improvement Plan:

- Consultation with new employees may be a helpful strategy to further understand taken for granted assumptions held by the change agent.
- Consultation and collaboration will be important (but within the realities of a nonbicameral system).
As previously stated, one’s discipline contributes to how one sees the world and disciplines represent subcultures with their own cultural DNA that will also require analysis. Disciplinary identities and cultural affiliations are strong and as Strober (2011) discovered “some [faculty] feared losing their disciplinary identity by deep interdisciplinary engagement” (p. 112). However, when external data is reviewed – the topic of the next section – it becomes clear that a change is required despite how challenging the change may be.

**Relevant external data.**

Framing the POP requires an assessment of the current state of College X, which reflects the skills gap identified in numerous national and global studies. There is a growing identification of the essential “future skills” required for success in the workplace and the realization that they are typically lacking in graduates. The QS Global Employer Survey (2018) lists the top five core skills – and more specifically an employer ranking of satisfaction with graduates’ abilities with regards to these skills. The top five core skills are: problem-solving, teamwork, communication, adaptability and interpersonal skills (p. 13). Broken down, to include employer satisfaction with students’ abilities, the picture shows that with regards to:

- problem-solving skills – 97% of employers believe it is a very important/important skill whereas 67% are very satisfied/satisfied with their newly graduated hires’ abilities in this skill area;
- teamwork skills, 95% of employers believe it is a very important/important skill whereas 80% are very satisfied/satisfied with their newly graduated hires’ abilities in this skill area;
• communication skills, 95% of employers believe it is a very important/important skill whereas 71% are very satisfied/satisfied with their newly graduated hires’ abilities in this skill area;

• adaptability skills, 92% of employers believe it is a very important/important skill whereas 72% are very satisfied/satisfied with their newly graduated hires’ abilities in this skill area; and

• interpersonal skills, 92% of employers believe it is a very important/important skill whereas 77% are very satisfied/satisfied with their newly graduated hires’ abilities in this skill area (p. 9).

These statistics demonstrate that there is a gap in the preparedness of graduates in these key essential skills. This gap needs to be addressed.

With a focus on the effects of technology/automation disruption and the skills required of Canadian youth in an age of disruption, a Royal Bank of Canada (2018) study determined that more than 25% of Canadian jobs will be affected. However, while jobs will be lost, many new jobs will be created. The World Economic Forum (2018) has quantified this job loss/gain and estimates a decline of .98 million jobs worldwide and a gain of 1.74 million jobs (p. viii). The jobs gained will be in response to an increasing demand for “foundational skills such as critical thinking, coordination, social perceptiveness, active listening and complex problem solving” (p. 3). These skills can be thought of as resilient to disruption and, according to the World Economic Forum (2018), provide a focus for preparing the future workforce by “highlighting the types of adaptation strategies that must be put in place to facilitate the transition of the workforce to the new world of work” (p. viii). In other words, the demand for human skills, the ones that cannot be automated, will become critical.
Considering that these skills are lacking and they are identified as resilient competencies because they are less susceptible to disruptive automation and technology, it is important that they are incorporated into College X’s curriculum in order to “deliver innovative learning opportunities” that “prepare career-ready graduates to be leaders in their fields” (College X Strategic Plan, 2019). The desired future state is for interdisciplinary explorations that provide the opportunity for students to learn and demonstrate these resilient competencies. This future state is juxtaposed with “an awareness of the divergence between the pace of change and the inertia of our institutions” (Bakhshi, Downing, Osborne & Schneider, 2017). College X has an opportunity to stand out by responding to the future skill requirements of the workforce by implementing interdisciplinary opportunities. The next section explores the topic of interdisciplinary teaching and learning to elucidate what this could mean for College X.

**Recent literature on interdisciplinarity and interdisciplinary teaching and learning.**

As previously established, increasingly complex problems require interdisciplinary solutions and more higher education institutions are interested in incorporating interdisciplinarity into their curriculum (Elliott, Oty, McArthur & Clark, 2001; Goodman & Huckfeldt, 2014). A neoliberal perspective is suggested as:

There is clearly pressure on higher education providers for increased emphasis on graduate employability to justify the investment in higher fees, which has led to an increased focus on the practical application of learning....This evolving landscape generates new demands for global citizens and future employees who have the skills to work in multi-professional teams and adopt holistic approaches to complex problems, but higher education largely remains structured on a conventional, disciplinary basis. While disciplines will continue to underpin the foundations of our knowledge, the issue of interdisciplinary learning and teaching provision becomes increasingly relevant for institutions preparing students for a changing world. (Lyall, Meagher, Bandola & Kettle, 2015, p. v)

While the interest may be clearly evident, what is less clear is what is meant by “interdisciplinarity” (Lattuca, 2002). Definitions vary and interdisciplinary is either defined as
“filling the gaps that disciplinarity leaves vacant or in terms of transcendence surpassing what disciplinarity can ever hope to achieve” (Chettiparamb, 2007, p. 13). For the purpose of this Organizational Improvement Plan, the working definition is an amalgam of the definitions proposed by Klein and Newell (1997), the Organisation for Economic Co-operation and Development (1972) and Boix Mansilla et al. (2000).

Taken together, the operational definition of interdisciplinarity, used for purpose of this OIP, is that it is an approach to solving complex, real world problems by integrating concepts, methodologies, terminology and ways of knowing and seeing from more than one discipline. It is important to note that, interdisciplinarity is more than just an exposure to different disciplines but the intentional integration of disciplinary knowledge in order to address complex problems. Integration is the key difference between interdisciplinary and multidisciplinary curriculum (Spelt et al., 2009). The integrative nature, consequently, increases the potential for disturbing disciplinary boundaries and unsettling disciplinary identities of faculty. Interdisciplinarity requires faculty to compare and contrast approaches and pedagogical assumptions that underpin their disciplinary orientation. Hence, the concept of psychological safety is so integral to this OIP.

Moreover, just as the definitions are varied, so too are the drivers of interdisciplinarity and the approaches to teaching and learning. Drivers of interdisciplinarity include existing connections between faculty members, institutional strategy, funding opportunities, workforce requirements as well as the nature of some disciplines (Lyall et al., 2015). In the case of College X, the approach will be to build upon and/or create connections between faculty to stimulate interdisciplinary learning opportunities mainly through a Community of Transformation experience, further described in Chapter Three and in Appendices 1 and 2. The subject of the
pedagogy of interdisciplinarity is an underrepresented area in the literature (Spelt et al., 2009; Lyall et al., 2015; Lattuca et al., 2004). However, teaching methods identified in the literature include coteaching, problem-based learning, interdisciplinary electives, multiperspectival core courses and others (Lyall et al., 2015). These options will be explored as part of the Community of Transformation.

Challenges for interdisciplinarity teaching include disciplinary differences in teaching and assessing (Shibley Jr., I.A., 2006; Spelt et al., 2009) as well as the length of time required for students to have a strong enough disciplinary foundation to begin to integrate their knowledge with other disciplinary approaches (Spelt et al., 2009). This is particularly relevant in a community college setting with shorter credential durations than the university sector where interdisciplinary studies are currently more prevalent. The integrative nature poses challenges for students who must be grounded in their own disciplinary thinking prior to being able to contribute to “boundary-crossing” (Spelt et al., 2009) explorations. The conclusion by Lyall et al. (2015) is that institutions serious about integrating interdisciplinary activities need to take a strategic and gradual approach with clear goals and involve the whole institution, as well as recognize that interdisciplinary education requires significant resourcing if it is to be successful. Consequently, the change implementation plan, described in Chapter Three, intentionally moves slowly and methodically before a large scale rollout is considered.

The growing understanding of College X’s cultural orientation, the legitimate case for interdisciplinarity, along with an established definition and a foundation of evidence-based teaching approaches, lead to some additional lines of inquiry that need to be pursued. Therefore, three guiding questions emerge out of the main Problem of Practice.
Guiding Questions Emerging from the Problem of Practice

There are three main guiding questions. However, there is a compendium of further questions embedded within:

**Question 1: How does interdisciplinarity align with identified College X priorities?**

How does this Organizational Improvement Plan strategically address priorities set by the senior executive team and endorsed by the Board of Governors? Resources (human and financial) are finite and, therefore, it is critical that the development of an interdisciplinary framework be aligned with priorities established in the Strategic Plan. How can the alignment be effectively communicated? An affinity exists with the statement that College X will “provide learners with the skills they need now and into the future” (College X Strategic Plan, 2019). As outlined earlier, the literature delineates the essential employability skills that College X learners will need in the future. With the research of Klein (1999), the connection between interdisciplinarity and the development of these future skills is made. She states that:

The desired outcomes in interdisciplinary programs include:

- greater tolerance of ambiguity and paradox
- sensitivity to ethical dimensions of issues
- ability to synthesize or integrate
- ability to demythologize experts
- humility and sensitivity to bias
- enlarged perspectives or horizons
- critical thinking and unconventional thinking
- empowerment
- creativity and original insights
- ability to balance subjective and objective thinking. (p. 27)

The change agent must determine the most effective way to promote the connection of interdisciplinarity as a solution for identified College X priorities so that interdisciplinarity is considered as a front-running strategy by the senior leadership team?
Question 2: What approaches fit with the observed culture at College X and how can this be translated into strategies to inspire others to think differently?

The College X culture is collegial within a bureaucratic governance structure. According to Morgan (2006) multiple experiences of culture can coexist within an organization. However, how does the change agent respect a collaborative culture within a bureaucratic governance structure? How does this reality work within the chosen leadership approaches? Furthermore, how is the culture shaped by disciplinary subcultures? If “shared values, shared beliefs, shared meanings, shared understanding, and shared sense making are all different ways of describing culture” (Morgan, 2006, p. 134), how will a shared meaning be created when disciplines are brought together? What is the best way to create safe space for exploring disciplinary disruptions?

Question 3: What are the key ingredients for creating psychological safety (Schein, 2017) to support disruptive interdisciplinary explorations?

Disrupting disciplinary boundaries will create upheaval (Strober, 2011) and the human implications of change must be considered in order for successful change to happen (Buller, 2015). What constitutes psychological safety? How is this experienced in similar and different ways by those from different disciplinary backgrounds? How will trust be established and nurtured by the change agent (both by the change agent’s interactions with others and by the change agent facilitating interactions between those from different disciplinary backgrounds)?

All three of these questions are addressed throughout the entire Organizational Improvement Plan and must remain at the fore of the change agent’s leadership-focused vision for change.
Leadership-Focused Vision for Change

How the future state improves the situation.

To answer the question about how the future state improves the situation, it is helpful to consider what would happen if the change did not occur (Cawsey, Deszca, & Ingols, 2016). The answer provides an indication of how strong the need for change is. On one hand, it is possible to consider that there is not a consequential implication. College X will continue to offer its strong disciplinary-focused programs. However, what will be lost is the opportunity to enact a key objective in the new Strategic Plan (2019) as previously described: to prepare learners with the education they need now and into the future (College X Strategic Plan website, 2019). As College X has a responsibility to their Board of Governors to enact the Strategic Plan, interdisciplinarity is an important, evidence-based means to prepare learners for the future.

There is also a burgeoning interest in interdisciplinarity (Goodman & Huckfeldt, 2014; Holley, 2009; Lyall et al., 2015) and a growing pressure on postsecondary institutions to produce graduates capable of interdisciplinary work (Brewer & Flavell, 2018; Lyall et al., 2015). Evidence shows that interdisciplinary studies develop student abilities with regards to critical thinking, analysis and synthesis, creativity, innovative thinking and communication (Elliott, Oty, McArthur & Clark, 2001; Newell, 1994; Spelt et al., 2009) and more positive attitudes towards the learning content (Elliott, Oty, McArthur & Clark, 2001). Another consequence of College X not changing is the possibility of losing momentum resulting in disengaged faculty who have a developing interest in exploring interdisciplinary connections. The time is right for exploring what is possible and for a shared development of interdisciplinarity at College X.
Priorities for change.

In essence, this Organizational Improvement Plan is the beginning of a much larger change process (extending beyond the scope of this OIP). The focus of this OIP addresses the disruption to faculty identities (Strober, 2011) and the need for creating psychologically safe opportunities (Schein, 2017) for interdisciplinary conversations and supporting faculty to enter into these conversations (Strober, 2011). As described in the remaining chapters and in the Appendices, interdisciplinary conversations will be integrated by revamping preexisting activities occurring in the Teaching and Learning Centre, Applied Research Department, and Innovation Centre. Of specific interest is the development of a Community of Transformation model (Kezar, Gehrke, & Bernstein-Sierra, 2018). The COT will introduce interdisciplinarity as a concept in an environment designed to ensure psychological safety (Schein, 2017) and then lead into a deeper level of exploration with regards to interdisciplinary curriculum approaches and navigating disciplinary-informed pedagogical assumptions. The actual implementation of curriculum changes is beyond the scope of the proposed Organizational Improvement Plan and, accordingly, the change agent will need to work hard to manage expectations. Stakeholders are likely to focus on the goal of changing the curriculum without understanding the important groundwork that is required. To others, it may appear as if the project is not immediately bringing about a new interdisciplinary approach to the curriculum. Therefore, it will be important to widely communicate the full vision so that stakeholders have the appropriate context.

When the topic of interdisciplinarity has been broached at College X, faculty and staff often immediately want to talk about projects. However, as Buller (2015) points out, “Successful change leaders understand that change is produced by people” (p. 217). Without spending the time to address the people aspect, the barriers to implementation will not be addressed.
Furthermore, the disciplinary perceptions and hierarchical thinking will be an impediment to successful implementation (Strober, 2011). Hence, the importance of psychological safety.

**Change drivers.**

The proposed change is an example of second-order change because major adjustments to faculty and staff’s underlying values, beliefs and principles will be required as they move away from a purely disciplinary way of thinking to one that is interdisciplinary. Currently, some faculty have identified their interest in introducing interdisciplinary components to the curriculum but, at the same time, exhibited behaviours that indicate the presence of disciplinary hierarchies and the reinforcement of disciplinary stereotypes. The focus of the change required at College X is attitudinal at the individual level. Although the focus of change may be at the individual level, Kezar (2018) points to the need to examine “how various levels of the system influence and help create change at another level” (p. 73). The change agent will need to be cognizant of the interconnections.

As a second-order change, the change drivers will be significant in order to see change happen. Looking at the change drivers identified by Whelan-Berry and Sommerville (2010), several will be very important for change within College X. There will need to be a vision for change accepted across the institution and regular communication about the change will be necessary. While from a factual standpoint there is plenty of data about the future skills required of students, this may not be sufficient to drive change when values, beliefs and perceptions need shifting. “Change related employee participation” (Whelan-Berry & Sommerville, 2010, p. 182) will be exceedingly important due to the consultative/collaborative culture of College X and the autonomous nature of the faculty role to give shape to the curricular possibilities. A “whole college” approach means that the change drivers identified as “aligned human resources
practices” and “aligned organization structure and control processes” (Whelan-Berry & Sommerville, 2010, p. 182) would be required for change to fully happen. However, as pointed out later in Chapter Two, this degree of change is too large to be contemplated at College X and is, therefore, beyond the scope of this particular Organizational Improvement Plan. Even so, if these latter two change drivers are not considered, faculty will have ideas but there will be the structural challenges to enact those ideas. This becomes clearer when analyzing College X’s change readiness as outlined in the next section.

**Organizational Change Readiness**

**Tools for analyzing organizational change readiness.**

Holt et al. (2007) define change readiness as “the extent to which an individual or individuals are cognitively and emotionally inclined to accept, embrace, and adopt a particular plan to purposefully alter the status quo” (as cited in Khedhiri, 2018). What is noticeable at this early juncture, is that anecdotally some faculty are, in fact, dissatisfied with the gap that exists between the curriculum and the actual requirements of the workplace – a predictor of successful change (Schein, 2017; Ely, 1990). Some faculty have begun conversations with colleagues about interdisciplinary projects they could work on together for the benefit of their students. Interestingly, some of these conversations happened during the last academic strike when faculty from multiple programs, who would not have otherwise interacted, were meeting on the picket lines and natural conversations were struck. From this group, there are potential champions to promote interdisciplinarity at College X. Therefore, while there may be a cognitive inclination for change amongst a group of early adopters, the emotional aspects of change need to be addressed before interdisciplinary explorations can happen. Kezar (2018) analyzes overall
change readiness using a survey tool that encompasses: planning, people/leadership, politics, culture and sensemaking/learning.

In the following section, each of Kezar's (2018) change readiness aspects will be applied to the situation at College X in order to understand the overall change readiness.

**Planning.**

In terms of readiness, the change agent has done significant planning. However, the vision for change is currently the vision of the change agent as is the change implementation plan (as described in Chapter Three). The collegial leanings within College X’s bureaucratic structure mean that it will be critically important to vet the vision within College X’s community in order to validate a shared vision and to use this collaborative approach as a time to reinforce the connection to the institution’s priorities (which is also key for buy-in from the senior executive team). The consultative process will also identify roadblocks not anticipated by the change agent as well as potentially new resource requirements. This is a significant part of the strategy of addressing the tension between the collegial/collaborative culture and the bureaucratic structure. With respect to financial support for these resource requirements, College X is not currently ready for this conversation, however, the opportunity will be there with an effective rationale communicated about how interdisciplinarity is an evidenced-informed mechanism for reaching articulated college strategic objectives. Finally, the role of students as an important stakeholder group must not be overlooked.

**People/leadership.**

As identified earlier, College X has a collaborative culture and distributed leadership (Gronn, 2002) is built into the framework of this OIP. While champions have not yet been officially identified, they certainly exist. As previously mentioned, a number of faculty have
organically piloted what can be described as interdisciplinary approaches. For the 2019/20 academic year, a new shared office space for five faculty was created and intentionally populated with faculty that demonstrated an interest in collaborating outside of their program discipline. All of these faculty also have experiences, wisdom and ideas to contribute to the initial development of an interdisciplinary framework.

The College’s Teaching and Learning Centre has the expertise and the mandate to provide much needed faculty development (Lyall et al., 2015) with regards to the pedagogical considerations of interdisciplinarity. There is an emerging focus on the Scholarship of Teaching and Learning at College X which provides another possible avenue for introducing interdisciplinary approaches. An area requiring attention will be the outreach to students to share the vision and gain their input and buy-in (Goodman & Huckfeldt, 2013). From a people/leadership perspective, ideally the change agent will be provided with dedicated time to act as the project lead for the OIP implementation as identified in Chapters Two and Three with regards to the resources required.

**Politics.**

At this stage, the OIP has the interest of the senior academic leader. The political implications for the OIP have not yet been fully explored but should be anticipated. This OIP will invoke organizational change and there are two levels to the power equation: the first is the power relationship between disciplines and the second is the neoliberal power relationship between faculty and administration. It will be important to understand the competitiveness between disciplines and their ascribed disciplinary hierarchy (Strober, 2011). One of the identified barriers to successful interdisciplinary education, as studied by Baker, Egan-Lee, Martimianakis and Reeves (2011), is the “unequal power relations that exist
between…professions” (p. 98). There is also a perceived hierarchy based on the level of the earned credential (ranging from one year certificates to four year honours degree). Successful change will require anticipating who is best served by the status quo because “those with a great deal of symbolic and economic capital [have] less interest in changing the status quo than [those] with less such power” (Strober, 2011, p. 68). Adaptive and distributed leadership approaches will assist with this task (as described in subsequent chapters).

The second power relation exists between the change agent, as the educational administrator, and the faculty. Therefore, the political implications of this Problem of Practice involve the change agent’s own introspection as an ethical leader (see Chapter Two) to deconstruct usage of power: what is the purpose for changing the status quo? What bias exists? How might power be exerted over others in moving this initiative forward? What neoliberal influences undergird the power relations? In the aftermath of the longest labour dispute in the Ontario College system, reflecting on these questions becomes even more critical for success.

Culture.

The cultural dimension is very significant to this OIP as highlighted by references to Schein (2017) and Morgan (2006). While many faculty express a preliminary belief in the importance of interdisciplinarity, this agreement is at the surface level and dissipates when interprofessional conversations challenge disciplinary hierarchies and philosophical underpinnings. Inspiring a shared vision through information sharing, consultation and listening to various stakeholders will be critical for change. The change agent needs to be aware of the fact that College X has existed with minimal change disruptions up until now and the culture of innovation is quite low. Certainly, there are pockets of innovative activity but it is not the defining culture of College X. However, with a change in senior leadership, much is changing
and this will affect the equilibrium of faculty and staff and their fortitude for the change represented in this OIP. Cawsey et al. (2016) warns that “individuals may recognize the need for change in some departments and functions but be resistant to recognizing the need for change as it gets closer to home” (p. 107). This is a real consideration for introducing interdisciplinarity in the midst of other changes.

**Sensemaking/learning.**

Sensemaking (Weick, 1995) is a framework that integrates well with the cultural theoretical framework and is the bedrock of the communication plan presented in Chapter Three. Understanding how stakeholders make sense of the proposed change is in its early stages and needs to move beyond anecdotal conversations to broader College-wide consultation. College X’s data capacity to support the change needs further work: What is the purpose of the data collection? What will be measured? How will the data be collected?

**Address competing internal and external forces that shape change.**

The internal force of disciplinary identity is a major element affecting the required change. However, there are multiple other internal forces at play and these are systems issues. Specifically, the issue is the rigidity of systems and/or the siloed nature of departments within College X. These include, but are not limited to, the quality assurance cyclical system that reviews programs in isolation of one another; the scheduling of classrooms; the lack of space that would be conducive to groups of students from different academic programs working together; the limitations of student information systems to track students outside of a traditional program model. This list illuminates the ultimate need for a “whole college approach” to problem solving. External forces are less evident and the focus will be on addressing competing internal forces.
Chapter 1: Concluding Thoughts

The conceptual framework visual (Figure 1) captures the leadership-focused vision for change to create a psychologically safe environment for the necessary changing of mindsets, perceptions and values towards interdisciplinarity. Only then will College X be in a position to better prepare learners with the skills they need now and into the future, a central tenet of the College’s strategic plan. Figure 1 shows how the theoretical framework of cultural theory integrates with the leadership frameworks of adaptive leadership and distributed leadership – chosen in response to the organizational context and change readiness. The various elements of the conceptual framework work together to provide the path for changing perceptions and behaviours which is a requisite activity for interdisciplinary explorations. In other words, an integrated approach is required for College X to move forward as the problem is too complex to be addressed in the absence of integrating multiple perspectives. In Chapter Two, possible solutions start to take shape while Chapter Three more closely analyzes the steps required to actualize the chosen solution.
Chapter 2: Planning and Development

The following chapter expands upon the contextual information provided in Chapter One and describes the leadership framework and process to provide a foundation for the implementation of an interdisciplinary approach to curriculum at College X. The plan respects the cultural context and practical realities of College X, the need for psychological safety, as well as the orientation of the change agent’s leadership style. In order to move from a disciplinary to an interdisciplinary focus, Heifetz and Laurie’s (1997) adaptive leadership and Gronn’s (2002) distributed leadership will be utilized while bearing in mind the cultural environment that shapes perceptions and values. By analyzing in further detail the information introduced in the preceding chapter, possible solutions to address the Problem of Practice emerge. Furthermore, this chapter explores the considerations for ensuring an ethical commitment within the aforementioned leadership approaches.

Leadership Approaches to Change

Recalling that increasingly complex problems require interdisciplinary solutions and that an interdisciplinary curriculum provides learners with the opportunity to acquire skills sought after by employers, there is a leadership opportunity at College X to influence change. As identified in Chapter One, adaptive leadership (Heifetz & Laurie, 1997) and distributed leadership (Gronn, 2002) are the central leadership approaches employed in this Organizational Improvement Plan. Cultural theory (Schein, 2017) informs these two leadership approaches, as shown in the conceptual framework (previously introduced in Chapter One – Figure 1). The conceptual framework also demonstrates that the application of both leadership approaches helps with changing perceptions and beliefs, which must be addressed in a psychologically safe way, if interdisciplinary approaches to teaching and learning are to be successfully implemented.
**Adaptive leadership.**

Heifetz and Laurie (1997) outline six adaptive leader behaviours that need to be considered as part of the change leadership strategy:

1. Get on the balcony.
2. Identify adaptive challenges.
3. Regulate distress.
4. Maintain disciplined attention.
5. Give the work back to the people.
6. Protect leadership voices from below.

**Get on the balcony.**

Simply stated, this involves intentionally creating time and space to gain perspective. While the change agent at College X currently understands the perspective of a particular group of programs within one School, it will be important to gain a more comprehensive perspective spanning across all College programs and on all three campuses. This will involve intentionally seeking to understand the disciplinary perspectives and human relations that exist between and within various programs. Due to the tension caused by having a collaborative culture within a bureaucratic system, the change agent will also need to spend time on the balcony to understand the faculty’s potential frustration with the system in order to be able to adequately convey the collaborative elements of the proposed solution so that faculty truly feel that they have a voice.

**Identify adaptive challenges.**

There is a difference between technical challenges and adaptive challenges (Heifetz, 1994; Heifetz & Laurie, 1997). Technical challenges are ones that a leader has the ability to fix on their own while adaptive challenges are problems they cannot fix. Their role becomes one of enabling
others to make changes. The implementation of interdisciplinarity is an adaptive challenge as it will require, amongst other things, faculty to change from a singular disciplinary orientation to an interdisciplinary one.

**Regulate distress.**

Many faculty strongly identify with a disciplinary orientation that shapes their communication styles, cultural systems and communities of belonging (Strober, 2011). Therefore, introducing interdisciplinarity will create stress and uncertainty for faculty. It will be important to be attune to the stress levels of faculty as plans take shape in order to regulate distress so that interdisciplinary initiatives can move forward. The concept of the “holding environment” (Heifetz, 1994; Heifetz & Laurie, 1997) is central to the adaptive leadership approach and “refers to establishing an atmosphere in which people can feel safe tackling difficult problems, but not so much so that they can avoid the problem” (Northouse, 2016, p.266). Creating space for conversations where concerns can be constructively shared is one approach to the challenge. The same approach is important with addressing the bureaucratic/collaborative tension.

**Maintain disciplined attention.**

This leadership behaviour will be hard to follow due to the ebbs and flows of the academic cycle. During the semester, faculty immerse themselves in teaching. It is difficult to engage in any additional activities during the semester – let alone ones that involve potential conflict and stress. Yet, consultations and action will be necessary to accomplish during the academic year to maintain momentum.

**Give the work back to the people.**

This leadership behaviour will be key for generating faculty buy-in for interdisciplinarity. Considering the aforementioned cultural value placed on consultation, within the bureaucratic
structure of College X, faculty will need to feel they have had a say in how interdisciplinarity is integrated. However, giving the work back to the people is more than this. It is enabling people to be involved in solving the problem on their own rather than direction coming solely from the leader (Heifetz & Laurie, 1997).

**Protect leadership voices from below.**

There are challenges inherent with interdisciplinarity and the resultant bringing together of different disciplinary backgrounds due to the status hierarchy preestablished between disciplines. An important leadership role for the change agent will be to ensure that all voices are heard.

Adaptive leadership is particularly relevant for changes that require cultural shifts in habits and attitudes (Jones & Harvey, 2017), as described in this particular Problem of Practice. Furthermore, Jones and Harvey (2017) point to synergies between adaptive and distributed leadership approaches. Adaptive leadership and its six leadership behaviours integrate well with distributed leadership (Gronn, 2002) – particularly Heifetz and Laurie’s (1997) behaviours with regards to giving the work back to the people and protecting leadership voices from below. A shared approach to leadership respects the culture of College X where a top-down different leadership approach would not be culturally responsive (Gronn, 2002; Jones & Harvey, 2017). Yet this leadership approach still recognizes that Ontario community colleges are not bicameral and decisions will not be democratically decided even though expert opinions throughout the organization will be sought. To further understand distributed leadership, the work of Gronn (2002) is explored next.

**Distributed leadership.**

Gronn (2002) posits that a new expression of leadership is needed to “[accommodate] changes in the division of labor (sic) in the workplace, especially, new patterns of
interdependence and coordination which have given rise to distributed practice” (p. 423). In
essence, what Gronn (2002) proposes is a leadership model that parallels interdisciplinarity as it
requires thinking about the connection points between more than one perspective and vantage
point. Furthermore, as cited in Kezar (2018, p. 144), outcomes supported by collective leadership
include “increased problem-solving capabilities, greater creativity and organizational
effectiveness, increased motivation and dedication by members of leadership groups, greater
satisfaction with decision-making, increased social integration, more positive relationships
within organizations (Bensimon & Newmann 1993; Pearce & Conger 2003)”. Therefore, the
outcomes of this type of leadership mirror the outcomes of interdisciplinary work. Furthermore,
the relational qualities required of the distributed leadership approach (Jones & Harvey, 2017) fit
with the leadership approach of the change agent at College X.

Delving further into Gronn’s (2002) description of distributed leadership, other points of
connection become evident. Gronn speaks of distributed leadership as numerical action that, like
interdisciplinarity, counts the contributions of individuals as being equally valid and increases
the sustainability of the changes because of the collaborative approach to developing solutions
and plans (Jones & Harvey, 2017). Gronn (2002) states that distributed leadership as numerical
action “does not privilege the work of particular individuals or categories of persons, nor is there
a presumption about which individual’s behavior carries more weight with colleagues” (p. 429).
The concept of psychological safety aligns with Gronn’s collaborative approach which equally
values multiple voices, thereby providing a leadership tool for protecting psychological safety.

Additionally, Gronn (2002) describes distributed leadership as concertive action, of
which he names three different forms: spontaneous collaboration, intuitive working relations
and institutionalized practices (Gronn, 2002). Each of these could also describe what happens
during interdisciplinary explorations. Interdisciplinarity, as spontaneous collaboration, occurs unexpectedly when people come together and share their expertise to solve a problem. To date, the interdisciplinary initiatives that have occurred at College X were not due to an intentional interdisciplinary framework but were examples of spontaneous collaboration. The recent creation of shared office space for five faculty from three different Schools could organically be the start of intuitive working relations which Gronn (2002) describes as happening “over time when two or more organization members rely on each other and develop a close working relationship” (p. 430). The shared office, which includes a meeting space for the use of the five faculty, allows for easier and ongoing communication amongst faculty from different disciplines to help build trusting relationships that, in turn, could foster interdisciplinary understanding. Gronn (2002) explains, “Dissatisfaction with existing arrangements can often stimulate the search for new decision elements” (p. 430) and the institutionalizing of practices. This is the formalization of distributed leadership, which would encourage College X to consider the official recognition of contributions from various contributors to interdisciplinary initiatives.

Before leaving the discussion on leadership approaches to change and moving to a discussion about how to change, it is important to return to the fact that the Ontario college system is different than the university system – including the reality that it is not bicameral (Hogan & Trotter, 2013). Unlike with their university counterparts, decision-making resides with academic administration in the Ontario college system. Therefore, there is an inherent tension at College X because of having a culture of being collaborative and consultative but operating within a system that is ultimately bureaucratic. The change agent cannot work outside of this reality but must be cognizant of the tension. For instance, using Gronn’s (2002) idea of distributed leadership as numerical action and Heifetz’s (1997) leadership behaviours, the change
agent can actively seek out and value input from faculty as opposed to the change agent solely determining the course of action. More specifically, leadership can be distributed during the Community of Transformation stage (see Possible Solution Three) by allowing faculty to give shape to the interdisciplinary projects that evolve rather than being prescriptive and assigning the projects to faculty.

Finally, while adaptive and distributed leadership provide the leadership approach to change, they must fit within the theoretical framework of this Organizational Improvement Plan – cultural theory. Schein’s (2017) cultural theory provides not only the theoretical framework for this OIP but also the framework for leading the change process at College X as outlined in the next section.

Framework for Leading the Change Process

Schein adapted the Lewin (1947) model of change and proposed the Stages and Cycle of Learning/Change (Schein, 2017). The connection of change with learning is significant in the application to a higher education institution. In particular it is significant in this Problem of Practice, which ultimately is about a new approach to teaching and learning to better prepare students for the future requirements of work. This section describes Schein’s (2017) adaptation of the Lewin model and applies it to the specific situation at College X represented by the Problem of Practice described in Chapter One. Woven into this section on the framework for leading the change are strategies taken from adaptive and distributed leadership, which are compatible with Schein (2017).

The stages and cycle of learning/change.

For Schein (2017), the three stages of learning or change are:
1. creating the motivation to change;

2. learning new concepts, new meanings for old concepts, and new standards for judgement; and

3. internalizing new concepts, meanings, and standards (p. 323)

Each of these stages has unique application to College X with regards to managing change and each of the three stages is further explored below.

**Stage 1: Creating the motivation to change.**

Cawsey et al. (2016) describes this stage as “the process that awakens a system to the need for change – in other words, the realization that the existing equilibrium or the status quo is no longer tenable” (p. 65). According to Schein (2017), there are four different processes involved in creating the motivation to change:

1. disconfirmation

2. creation of survival anxiety or guilt

3. learning anxiety produces resistance to change

4. creation of psychological safety to overcome learning anxiety (p. 323)

In extreme situations, disequilibrium involves creating or uncovering a crisis. Introducing interdisciplinarity does not represent a crisis; however, as described in Chapter One, higher education institutions are not fully producing career-ready graduates as evidenced by the mounting literature that identifies the need for specific future essential employability skills and the gap in employees exhibiting these skills (The Economist Intelligence Unit, 2015; QS Intelligence Unit, 2018; Mourshed, M., et al., 2013). This gap is meaningful to both faculty and
administrators and has the potential to create disequilibrium necessary to motivate change across the institution.

It is necessary to go deeper at this stage so that the awareness raising is not discounted and, therefore, unsuccessful in motivating changed behaviour. Disconfirming information must be of sufficient magnitude to outweigh “the realization that new ways of perceiving, thinking, feeling, and behaving may be very hard to learn” (Schein, 2017, p. 324). In the case of this POP, the reason to change must be sufficient for faculty to engage in the stressful process of moving beyond their disciplinary values and perceptions and into a new interdisciplinary culture. If not, there is no motivation to change.

For faculty willing to accept the motivation to change, there will be resultant challenges and changes to their disciplinary ways of thinking that create learning anxiety due to the perceived loss of identity, group membership, and competence or, potentially a loss of power or position (Schein, 2017). Academic freedom is less understood in the Ontario college system as compared to the university system (Hogan & Trotter, 2013); however, learning anxiety may be provoked by faculty’s perceived loss of academic freedom with the introduction of interdisciplinary conversations. As Hogan and Trotter (2013) identify, “academic freedom is premised on the expectation that the professoriate will self-regulate and participate in institutional governance” (p. 71). The introduction of interdisciplinarity at College X can accommodate the former (by not prescribing and letting faculty give shape to what interdisciplinarity will look like) but is not able to address the latter and fear of loss is at the root of resistance to change during this initial stage. According to Schein (2017), however, some aspects of the loss cannot be mitigated despite creating psychological safety through:

- outlining a persuasive positive vision
• providing formal training
• involving the learner
• focusing at the group level
• creating resources
• providing role models
• establishing support groups for learners
• removing barriers and replacing with new supportive structures/systems. (Schein, 2017, pp 328-330)

Psychological safety is key for being able to move into the next stage. It is only after this first stage has occurred that faculty at College X will be in a position to engage in conversations about interdisciplinarity and what a move towards an interdisciplinary curriculum might mean for them as disciplinarians.

**Stage 2: Learning new concepts, new meanings of old concepts, and new standards of judgment.**

Schein (2017) explores culture change (the adoption of new values and beliefs) by way of “cognitive redefinition’ of some of the core concepts in the learner’s assumption set” (p. 334). This statement can be directly applied to the move from a disciplinary to an interdisciplinary mindset. The disciplinary identity shapes the assumptions held by faculty (Strober, 2011) and, for faculty to make sense of the new interdisciplinary identity, they will need to be able to learn what this means and to make meaning of this new concept and identity. This will be an important task for the change agent. Furthermore, Schein (2017) identifies new approaches to evaluation to be adopted. In curriculum change terms, that means that new approaches to student assessment will need to be considered as disciplinary-informed assessment strategies may not fit within a new interdisciplinary environment.

Schein (2017) identifies two ways in which new behaviour, beliefs, and values are acquired: through mimicking a trusted role model or through experimentation. There are multiple
tools that can be utilized toward this end including campus conversations, faculty development opportunities, creating concept papers, discussing external ideas, developing cross-departmental working groups (Kezar, 2018). Elements of adaptive leadership (Heifetz & Laurie, 1997) also support the required change and Schein’s approach ensures that the work is given back to the people (Heifetz & Laurie, 1997). Schein explains that “the change leader must be clear about the ultimate goal…but that does not necessarily imply that the learner has a choice about the ultimate goals, but it does imply that he or she can be given a choice of the means to get there when that seems appropriate” (Schein, 2017, p. 332). The change agent will have multiple opportunities to reinforce this notion during the Community of Transformation experience as described in this chapter and the next.

Schein’s approach also implies that all voices are important to the change process, which is also in keeping with Heifetz and Laurie (1997). In terms of introducing interdisciplinarity, the implication is that once the College priority is set on interdisciplinarity – and the change agent establishes the goal, rationale, and vision – faculty will be able to explore and make sense of this new College direction through the Community of Transformation. The nonprescriptive approach of shared leadership respects faculty member’s autonomy for determining how interdisciplinarity can be incorporated into their courses/program. Schein (2017) is clear, though, that the change agent’s work is not yet complete. The final step in the change process, is the internalizing stage which is described next. It is only at the completion of the final stage that the cultural shift has truly occurred.

**Stage 3: Internalizing new concepts, meanings, and standards.**

According to Cawsey et al. (2016), this final stage happens when “the change is assimilated and the system re-enters a period of relative equilibrium” (p. 65). However, culture
change will not occur unless people experience actual results and, more specifically, results that represent an improvement (Schein, 2017). When this occurs, there is a buy-in that the work required to change was both significant and worthwhile. In the case of shifting disciplinary identities, it will not just be a matter of a change in behaviour but a deeper, transformative change in attitudes, values, and beliefs. As interdisciplinary teaching and learning will look differently, depending on the composition of the disciplines represented and the negotiated goals of the faculty involved each time, there will be regular movement throughout Schein’s three stages. However, at a systems level, what will change is the acceptance of the overarching goal of interdisciplinarity even if the manifestations change based on the disciplines involved in the interdisciplinary work.

Schein’s (2017) cultural theory provides a change path for the change agent at College X. The simplified three-step process described above, however, belies the challenges inherent in a second-order change and, therefore, conducting a critical organizational analysis is imperative – the topic explored in the next section through the lens of Schein (2017), Kezar (2018), and Bolman and Deal (2017).

Critical Organizational Analysis


The change model proposed by Schein (2017) not only provides a framework for “how” to change but also helps diagnose “what” needs to be changed. Fundamentally, this Organizational Improvement Plan is about dislodging beliefs and assumptions about teaching and learning and the construction of knowledge – both influenced by disciplinary identity. Required in its place is an ability to engage constructively with people from other disciplines to harness the strengths of various disciplinary knowledge in order to create new solutions to
complex problems. Therefore, the limitations of a sole disciplinary approach needs to be made
cognizant to individuals. Furthermore, psychologically safe space needs to be created so that
people can be more comfortably exposed to the disciplinary approaches of others in order to
discover new solutions and approaches that were not possible from a monodiscipline perspective.

**What to change: Kezar (2018).**

Returning to the change readiness analysis from Chapter One uncovers additional
systemic pieces needing to be changed under the categories of:

- planning;
- people/leadership;
- politics;
- culture; and
- sensemaking/learning. (Kezar, 2018)

In terms of the Planning category, this change initiative still needs a shared vision to
articulate what needs to be changed. The shared nature of the vision is important for the
leadership approach of this OIP, which is committed to collegial principles within a bureaucratic
system. Having campus-wide awareness-raising conversations that engage multiple people with
the outcome of a shared vision will be a foundational activity. The connection between the
shared vision and the College’s strategic priorities (previously articulated in Chapter One) can be
shared through campus conversations. There are further opportunities for connections if a college
scan is completed. For instance, what opportunities exist within the College’s Innovation Centre,
Applied Research Department or Teaching and Learning Centre (to be explored in more detail
later in this chapter)? These three established departments could adopt an interdisciplinary
approach or adopt the language of interdisciplinarity for projects that currently involve multiple
disciplines working together. The change agent will be called upon to use relationship authority
to influence peers in these departments and to communicate a sound rationale to the senior
executive responsible for the academic division (that encompasses these departments as well). The Planning category identifies the need to address senior leadership for adequate resourcing of the change initiative. In other words, as a middle manager, there will be conversations with those above, below and beside in order to move forward.

As identified in Chapter One, there are potential champions that need to be engaged formally. Under the People/Leadership category, these champions will help with Schein’s (2017) Stage Two of changing and learning as Schein points to the strategy of imitation in shifting culture. What also needs to be changed in this category is the development of a rewards or incentives structure (which will be touched on in the following section of possible solutions). Most definitely, faculty development opportunities will be required in order to build capacity for interdisciplinarity and to provide support for pedagogical considerations.

The Politics category provides a reminder of the need for senior leadership support. It will be necessary to present the details of this Organizational Improvement Plan and explain how interdisciplinarity provides a vehicle for reaching key strategic plan objectives of the College. At the faculty level, the politics of the power relationships between disciplines must be considered. The Cultural category (Kezar, 2018) is very much tied to the values, symbols, and stories of College X which is consistent with the approach taken by Schein (2017), which illuminates “what” needs to change from a cultural perspective. Finally, the Sensemaking and Learning category of change readiness identifies that a broader understanding of what faculty and staff understand about interdisciplinarity (and also disciplinarity) must still happen. Finally, Bolman and Deal (2017) provide another perspective on what to change as outlined next.
What to change: Bolman and Deal (2017).

Bolman and Deal (2017) provide another model for identifying what needs to change with their four-frame model: the Structural, Human Resources, Political, and Symbolic Frames. Buller (2015) provides guiding questions that help to analyze College X according to each of the frames. What is important to pull out from the questions related to the Structural Frame is the need to communicate how interdisciplinarity provides a mechanism for the College to prepare career-ready graduates, as promoted in the College’s mission statement and strategic plan. It is also imperative to identify the groups and structures within the College that already exist that the change agent needs to connect with as well as identifying any groups and structures that need to be established. There are a number of noticeable structural challenges for College X, including but not limited to:

- the limitations of the quality assurance system which reviews programs in isolation of one another on a five year cycle;
- the classroom scheduling system limitations and scheduling policy that impedes the ability to force scheduling of classes that would assist interdisciplinary courses; and
- the workload implications with some forms of interdisciplinarity like team teaching.

Bolman and Deal’s (2017) Human Resources Frame takes the idea of connecting with other groups a step further. It is imperative to anticipate the range of responses from various groups and also to identify the different levels of engagement. Each constituent group will require a different level and type of communication (further explored in Chapter Three). Next, the Political Frame (Bolman & Deal, 2017) anticipates what needs considering related to champions, on one end of the spectrum, to resistors on the other end. Currently, a few faculty have started to explore interdisciplinarity and have a preexisting relationship with the change
agent. Providing these faculty with opportunities to provide input into the initial stages of the plan has the potential to enhance their commitment. At the other end of the spectrum, resistors may be active but are more likely to be passive and suspicious of another change, preferring to continue teaching as they have. Furthermore, the student voice needs to be explored. What input do they have about equipping them with the future essential skills needed by employers? As Goodman and Huckfeldt (2014) point out, achieving student buy-in is important for the success of interdisciplinarity.

Finally, the fourth frame identified by Bolman and Deal (2017), the Symbolic Frame, is congruent with the work of Schein (2017) because it relates to organizational culture. This frame focuses on understanding what losses faculty might feel moving from a disciplinary to interdisciplinary culture. The Symbolic Frame reminds the change agent that changes must be congruent with the organizational culture at College X. This must be done authentically, and not just about reiterating catch phrases related to College values. Moreover, this frame emphasizes the importance of connecting the change process to recognizable organizational events, traditions, and symbols – something often overlooked (Buller, 2015). Buller explains that “as an antidote to this problem, the questions [associated] with Bolman and Deal’s four frames help academic leaders understand how a change process feels different to different stakeholders” (2015, p. 42). In an organization that is nonbicameral, but still values collaboration and consultation, the change agent is wise to reflect on how the change process will be perceived by different stakeholders in order to be as responsive as possible to the faculty perspective.

The following table (see Table 2) highlights the major learnings from each of the aforementioned frameworks and identifies the connection points between them, a precursor to the proposed solutions (outlined in the next section).
Table 2

**Identifying Themes of Change**

<table>
<thead>
<tr>
<th>Framework</th>
<th>Analysis of Needed Change</th>
<th>Cross Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• identifying and integrating disciplinary-influenced pedagogical approaches; and</td>
<td>Culture (Kezar, 2018)</td>
</tr>
<tr>
<td></td>
<td>• identifying disciplinary-specific ways of constructing knowledge, beliefs and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>assumptions.</td>
<td></td>
</tr>
<tr>
<td>Kezar (2018)</td>
<td>Planning:</td>
<td>Structural Frame and Political Frame (Bolman &amp;</td>
</tr>
<tr>
<td></td>
<td>• creating a shared vision;</td>
<td>Deal, 2017)</td>
</tr>
<tr>
<td></td>
<td>• bringing people together through campus conversations;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• identifying opportunities within College X for integrating interdisciplinarity; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>advocating for resources.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>People/Leadership:</td>
<td>Political Frame (Bolman &amp; Deal, 2017)</td>
</tr>
<tr>
<td></td>
<td>• engaging champions;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• creating meaningful rewards/incentives; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• providing faculty development opportunities.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Politics:</td>
<td>Structural and Political Frame (Bolman &amp; Deal,</td>
</tr>
<tr>
<td></td>
<td>• developing and presenting a rationale to senior leadership to gain their support;</td>
<td>2017)</td>
</tr>
<tr>
<td></td>
<td>• considering the implications of the intersection of collegiality and bureaucracy within</td>
<td></td>
</tr>
<tr>
<td></td>
<td>College X; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• addressing the power relations between disciplines.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sensemaking/Learning:</td>
<td>Planning, People/Leadership (Kezar, 2018)</td>
</tr>
<tr>
<td></td>
<td>• creating a shared and meaningful understanding of interdisciplinarity and discussing</td>
<td>(Schein, 2017)</td>
</tr>
<tr>
<td></td>
<td>the implications.</td>
<td></td>
</tr>
<tr>
<td>Bolman and Deal (2017)</td>
<td>Structural Frame:</td>
<td>Planning and Politics (Kezar, 2018)</td>
</tr>
<tr>
<td></td>
<td>• identifying the current structures and groups that need to be connected with or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>established;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• creating a strategy for communicating with: the senior executive team, the faculty,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>College department heads; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Framework</td>
<td>Analysis of Needed Change</td>
<td>Cross Reference</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>• addressing the structural challenges related to: the Quality Assurance Management System, classroom scheduling limitations, workload implications.</td>
<td></td>
</tr>
<tr>
<td>Human Resources Frame:</td>
<td>• anticipating the range of responses and recognizing the varying levels of engagement amongst stakeholders; and</td>
<td>Planning, People/Leadership, Sensemaking/Learning (Kezar, 2018)</td>
</tr>
<tr>
<td></td>
<td>• categorizing those that need to be consulted and informed and communicating appropriately.</td>
<td></td>
</tr>
<tr>
<td>Political Frame:</td>
<td>• ascertaining the needs of both champions and resistors;</td>
<td>Politics (Kezar, 2018)</td>
</tr>
<tr>
<td></td>
<td>• considering the implications of the intersection of collegiality and bureaucracy within College X; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• considering the student voice.</td>
<td></td>
</tr>
<tr>
<td>Symbolic Frame:</td>
<td>• anticipating the losses that faculty might feel;</td>
<td>(Schein, 2017)</td>
</tr>
<tr>
<td></td>
<td>• ensuring that actions are congruent with the College’s organizational culture; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• connecting initiatives to recognizable events, traditions and symbols of College X.</td>
<td></td>
</tr>
</tbody>
</table>

The choice of what to change, as analyzed through Bolman and Deal (2017) and Kezar (2018), is consistent with Schein (2017) at the cultural level. An analysis of Table 2 illuminates the areas of focus that are subsequently explored in the possible solutions to address the Problem of Practice. It will be important, amongst other strategies, to challenge disciplinary-informed beliefs; bring people together to cocreate a shared vision; engage champions; secure senior management support; understand the responses that people will experience; and so on as identified above. The synthesis found in Table 2 shapes the various solutions proposed in the following section.
Possible Solutions to Address the Problem of Practice

In this section, four possible solutions are explored. These are not necessarily discreet solutions and could, in fact, be scaffolded. In essence, they move from low involvement to high involvement, which translates into implications that range from low change intensity to high change intensity and low resource requirement to high. At no point is the idea of assigning interdisciplinarity or making interdisciplinarity mandatory within the curriculum considered as a possible solution. Such a prescriptive approach is not in keeping with the culture of College X where consultation and collaboration are highly valued. All solutions are proposed with the advice of Goodman and Huckfeldt (2014) in mind that “new [interdisciplinary] course design should be taken slowly and tested in small sections before it is implemented for everyone” (p. 87). In fact, implementing for everyone may not be practical or advisable.

Possible solution one: the organic approach

Essentially, this solution is about the status quo because no effort or resources would be required. Instead, the limited early interest from faculty would be left to grow organically. The rationale being that if initial interest happened without intervention, it can be left to develop in the same way. Interestingly, several of the preexisting examples of interdisciplinarity, had their genesis in conversations that occurred on the picket line during the Fall 2017 faculty strike. While walking the picket line, faculty from different programs/disciplines got to know one another (many for the first time), engaged in conversations about their courses, and discovered commonalities that led to a few interdisciplinary experiments upon completion of the strike. Lattuca (2002) describes a parallel phenomenon with faculty accidentally – rather than purposefully – entering into interdisciplinary collaborations. This first proposed solution would be a laissez-faire approach allowing these conversations to extend naturally from peer to peer
with the anticipation that interest could grow as faculty heard about what their colleagues were doing.

**Resources needed.**

The organic approach would be driven by faculty and require minimal institutional resources. As a result, this solution would be attractive if College X is looking for a low cost approach; however, the low cost likely also translates to low yield and a lesser degree of cultural change as the cultural change piece would not be intentionally supported.

**Benefits and consequences.**

The tradeoff of the organic approach and low resource needs is that there would be no institutional response to the challenges related to scheduling, classroom assignments and workload considerations, for instance. In terms of the framework for change, Schein’s (2017) need for the dislodging of beliefs and assumptions would not be systematically supported. The opportunity for success of the magnitude of second-order change would be difficult in the absence of intentional strategies to create a culture shift. There would be no college-wide gathering together of people (Weick, 1995; Bolman & Deal, 2017). While champions have, and would emerge, the opportunity would not be there to engage them intentionally. Faculty could organize themselves to advocate for further support but this would have to be done on a volunteer basis over and above their commitment to creating interdisciplinary student learning opportunities. Furthermore, it would be difficult to organize and cocreate a common vision, there would be no professional development support, no structural changes to processes or systems, no incentive structures nor financial resources assigned. Conversely, the hands-off, faculty-driven approach respects the collegial approach of faculty, is an expression of giving the work back to the people (Heifetz, 1994; Heifetz & Laurie, 1997) and fits the description of spontaneous
collaboration described by Gronn (2002). In terms of the student voice, there would only be coincidental opportunities, and not intentional ones.

**Possible solution two: the awareness campaign.**

To augment the organic approach – or instead of it – the second proposed solution is an awareness campaign. An awareness campaign would communicate what interdisciplinarity is about; describe the future skills required by employers and how interdisciplinarity addresses those skills; promote the benefits for College X’s learners; identify the connection to the strategic plan; and, share a vision to inspire faculty to consider their involvement. Key to a successful awareness campaign would be demonstrating an intentionality of purpose in order to create an institutional vision made known and shared by a wide group across the college.

**Resources needed.**

The development of the awareness campaign would require the naming of a project lead to design and oversee the campaign. This position would be an offload from the change agent’s main role in order to focus on the interdisciplinary initiative. Furthermore, the project lead would need to be officially introduced to the larger college community by the senior executive team in order to give legitimacy to the role. This person would need to understand the culture of College X and have credibility with and respect from both faculty and administrative staff. The person requires a solid understanding of interdisciplinarity and a growing vision that can be shared with others. To interest people to engage with the awareness campaign, resources would also be required to brand the initiative and create collateral materials. There are multiple competing priorities of people’s time so incentives to participate in awareness-raising campus conversations would be helpful and that would also require resources. To ensure that the campaign is
tricampus, a travel budget would be needed. These combined costs are a relatively low investment (in comparison to the next two solutions).

Table 3

*Resources Required for Possible Solution 2*

<table>
<thead>
<tr>
<th>Required Resource</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotional materials</td>
<td>$5,000 (in kind graphic design and marketing support from appropriate College X department)</td>
</tr>
<tr>
<td>Tricampus travel</td>
<td>$750</td>
</tr>
<tr>
<td>Incentives (for instance, branded promotional items)</td>
<td>$1000</td>
</tr>
<tr>
<td>Project Lead/change agent offload</td>
<td>$7,000 (charge of 5% of change agent’s time to the awareness campaign)</td>
</tr>
</tbody>
</table>

*Benefits and consequences.*

In a limited way, this second possible solution addresses the first stage of creating the motivation to change (Schein, 2017). A carefully designed awareness campaign could demonstrate that the status quo is insufficient and a campus-wide awareness campaign would bring larger-scale exposure to interdisciplinarity. It would be important to develop an awareness campaign that is meaningful to faculty and does not just appear as another passing educational fad. However, the awareness campaign falls short of providing a call to action because there is no follow-up activity to engage faculty in deeper conversations that begin to address disciplinary beliefs and perceptions. It would be difficult to create psychological safety and faculty development opportunities due to the nature of awareness campaigns. Furthermore, systemic challenges would not be addressed by an awareness campaign alone. Additionally, this is a more top-down approach driven by management and does not provide for collective leadership opportunities to support change (Kezar, 2018).
Possible solution three: the integrated approach.

The third proposed solution could follow the launch of an awareness campaign and provide both the call to action missing in the aforementioned solution as well as the supports needed for the deeper change required for changing perceptions and beliefs. An integrated approach would include integrating interdisciplinarity into preexisting areas of College X like the Teaching and Learning Centre, Applied Research Department, and Innovation Centre (described briefly here and, in more depth, in Chapter Three as this is the recommended solution of the four proposed solutions).

Integration with the Teaching and Learning Centre.

An interdisicplinary community of practice or, more specifically, a Community of Transformation (Kezar, Gehrke & Bernstein-Sierra, 2018) under the auspices of the Teaching and Learning Centre could provide a psychological safe space to start exploring interdisciplinarity. A COT is defined as “communities that create and foster innovative spaces that envision and embody a new paradigm of practice” within higher education (Kezar et al., 2018, p. 833). COT members build relationships as well as participate in shared conversations and activities as they critically reflect on a shared new area of teaching practice (Kezar et al., 2018) – an apt description of what is required for faculty to engage in interdisciplinary thinking. COTs are also a distributed structure (Kezar et al., 2018) so they align with a leadership approach built upon Gronn’s (2002) distributed leadership.

The COT focus on innovation and transformation fits the goals of introducing interdisciplinarity, a second-order change that challenges current values and beliefs. The COT model proposed by Kezar et al. (2018) aligns with Schein’s three stage change model because it focuses on a “disorienting phase” that mirrors the disequilibrium proposed by Schein, a
necessary ingredient for creating the motivation to change. For both Schein (2017) and Kezar et al. (2018), this leads into a time of exploring new concepts and ways of doing things followed by the implementation of changes into practice. COTs are typically a combination of in person and virtual contact between participants (Kezar et al., 2018) which fits well with the organizational reality of College X having three geographically-disbursed campuses.

The COT would bring interested faculty together (see Appendix 2 for a faculty readiness checklist) for a weekly gathering facilitated by the change agent in collaboration with the Teaching and Learning Centre. An important aspect of the distributed leadership approach will be the input of faculty participants to shape the COT learning experience. (See the Change Process Monitoring and Evaluation Plan in Chapter 3 for further discussion – particularly the references to Schein’s (2017) Stage Two). The COT experience would be structured into two consecutive phases:

1. First, the COT members would learn about interdisciplinarity as a concept in an environment designed to ensure psychological safety (Schein, 2017) and regulate distress (Heifetz, 1994; Heifetz & Laurie, 1997). A group of faculty from different disciplines would explore interdisciplinarity as an extension of their own disciplinarity and also have the opportunity to learn more about their colleagues’ disciplinary identities. By better understanding their own disciplinary identity and, by being exposed to the disciplinary identities of others, faculty can more safely move into the next part of the Community of Transformation.

2. In the second part, faculty would begin to explore possible interdisciplinary curriculum approaches (coteaching, problem-based learning, interdisciplinary electives, multiperspectival core courses, and others (Lyall et al., 2015)). This phase
would expose faculty to various disciplinary-informed pedagogical assumptions and provide tools for navigating these differences in order to build an interdisciplinary project or course based upon a shared vision (See Appendix 1 for further details).

The division of the COT into two phases is simply a representation of the increase in vulnerability of the exploration. The first phase establishes the groundwork for psychological safety that will be increasingly important as the participants move into the more contentious conversations that the second phase necessitates.

The Scholarship of Teaching and Learning (SOTL) is a burgeoning area of focus at College X and with support from the Teaching and Learning Centre, interdisciplinary ideas generated through the second part of the Community of Transformation could be created into SOTL research projects with funding, a form of rewards and incentive. The findings would provide additional information to help promote interdisciplinarity to other faculty and also provide evidence to substantiate further investments by the College into interdisciplinary initiatives.

*Integration with the Applied Research Department.*

College X is a top 50 research college in Canada (College X website, n.d.) and the Applied Research Department provides student learning opportunities through projects working directly with organizations and companies with a product/process challenge. Harkening back to the Leadership Problem of Practice identified in Chapter One, increasingly complex problems require interdisciplinary solutions (Busch, 2017; Buller, 2015; Dailey-Hebert & Dennis, 2015). Therefore, the Applied Research Department represents an opportunity to apply interdisciplinary approaches to these industry problems rather than being limited to disciplinary approaches. This is a new direction from a semantics or messaging perspective but is a natural fit to be explored
with industry partners and faculty in order to create interdisciplinary solutions to real world problems. The Applied Research Department reports into the same executive leader as the rest of the academic division which will assist the conversation.

**Integration with the Innovation Centre.**

The Innovation Centre is a relatively new space on campus that:

Cultivates positive learning experiences which help students develop employable skills they can leverage in any future career setting. These innovative learning opportunities allow students and industry leaders the rare chance to connect, collaborate and make a positive change within the surrounding community. (College X Innovation Centre website, n.d.)

Past activities of the Innovation Centre include design thinking workshops, social hack-a-thons to help solve community problems, marketing bootcamps, and action learning as a methodology for experiential learning. Therefore, the goal and activities of the Innovation Centre align with the goals of interdisciplinarity outlined in this OIP. Furthermore, there is value alignment as the Innovation Centre’s values include: critical thinking, reflection, collaboration, creativity, social impact (College X Innovation Centre website, n.d.).

Much like what was stated above with regards to applied research, there is a natural fit worthy of further conversations to increase the intentionality of attaching interdisciplinarity to the messaging and practices of the Innovation Centre. Furthermore, the physical space of the Innovation Centre provides an important resource for interdisciplinarity explorations and would be an ideal space for hosting the COT gatherings and also to book for classroom space once interdisciplinarity projects or courses roll out. Through the Innovation Centre, the incentive of seed money for interdisciplinary projects could also be handled.
Resources needed.

Solution Three requires significantly more resources than either of the previous two solutions; however, second-order changes require significant investment because of their level of difficulty. While solution two identified the need for a Project Lead, the scope of the role is much less than the scope of a Project Lead for this third solution. The project is both longer in duration and requires a greater level of leadership influence. The solution also requires the buy-in and sponsorship of the most senior academic administrator who provides leadership to the academic division including the Teaching and Learning Centre, Applied Research Department, and the Innovation Centre. Communication with the senior academic administrator will be crucial to ensure that they agree with the rationale and see interdisciplinary as a solution to meet the strategic initiatives for which they are accountable. Chapter Three more fully outlines the communication requirements as well as the resources required, for instance, to support the Communities of Transformation, faculty workload resource requirements and seed money.

Table 4

Resources Required for Possible Solution 3

<table>
<thead>
<tr>
<th>Required Resource</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Lead/change agent offload</td>
<td>$35,000/year (see Table 6 for a more detailed financial calculation)</td>
</tr>
<tr>
<td>Incentive funding for offloading 10 faculty to participate in Community of Transformation (phases 1 and 2) ($5,000 x 10 faculty x two semesters = $100,000)</td>
<td>$100,000/year</td>
</tr>
<tr>
<td>Incentive funding for offloading for SOTL and applied research ($5,000 x 10 faculty/year = $50,000)</td>
<td>$50,000</td>
</tr>
<tr>
<td>Teaching and Learning Centre, Innovation Centre, and Applied Research staff time</td>
<td>In kind</td>
</tr>
</tbody>
</table>
Benefits and consequences.

As previously mentioned, the benefit of this solution is the comprehensiveness of it and the greater ability to address second-order change. Solution Three provides for:

- psychological safety;
- development of a shared vision which respects a distributed leadership approach;
- rewards and incentives; and
- connection to recognized structures on campus.

However, the greater comprehensiveness also increases the challenges of implementation.

Possible solution four: the whole college approach.

The fourth possible solution is one that, in addition to the aforementioned, also addresses systems-level changes needed to support the implementation of interdisciplinarity. Certainly, incorporating interdisciplinarity into the curriculum is an academic matter; however, a truly transformative approach that addresses the complexities of interdisciplinarity will be enhanced by the involvement of other College departments. For example:

- Facilities and space planning – finding shared faculty space where ideas can incubate and suitable classroom space where students from multiple programs can converge to work on interdisciplinary projects;
- Scheduling – creating common timeslots for interdisciplinary conversations; identifying which School has the responsibility for submitting scheduling requirements when an interdisciplinary project encompasses programs from multiple Schools;
• Student Records – creating a formal cocurricular mechanism to acknowledge interdisciplinary education as part of the official student record; dealing with any student information systems issues created from shared courses or programs;

• Quality Assurance – moving away from reviewing programs in isolation (which eliminates a constructive opportunity for interdisciplinary exploration); intentionally asking about opportunities for interdisciplinary projects or courses during any formal program review or curriculum mapping exercises; and

• Human Resources – considering what type of organizational structure best reflects and enables interdisciplinary collaboration.

Resource needs.

When considering changing systems and processes, significant resources are required.

Table 5

Resources Required for Possible Solution 4

<table>
<thead>
<tr>
<th>Required Resource</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Lead/change agent offload</td>
<td>$35,000/year (see Table 6 for a detailed financial calculation)</td>
</tr>
<tr>
<td>Incentive funding for offloading 10 faculty to participate in Community of Transformation (phases 1 and 2)</td>
<td>$100,000/year</td>
</tr>
<tr>
<td>Incentive funding for SOTL (funding for five projects)</td>
<td>$5,000</td>
</tr>
<tr>
<td>Teaching and Learning Centre, Innovation Centre, and Applied Research staff time</td>
<td>In kind</td>
</tr>
<tr>
<td>Updating scheduling system software</td>
<td>unknown</td>
</tr>
<tr>
<td>Updating student information system software</td>
<td>unknown</td>
</tr>
</tbody>
</table>
**Benefits and consequences.**

Taking a “whole college” approach, instead of seeing this only as an academic division matter, will require influencing peers who lead other departments and their senior executives. In other words, implementing interdisciplinarity requires academic administrators to be intentionally interdisciplinary. By working collectively, there is an opportunity to implement a truly transformative interdisciplinary framework that prepares students for the changing needs of the labour force. However, the sphere of influence of the change agent may not be sufficient to influence outside departments and interdisciplinarity may not be prioritized in any current plans for changing processes and systems. As a result, even though this possible solution has the greatest impact for change, it also has significant costs and significant roadblocks and is, therefore, not the solution proposed for implementation in Chapter Three. Before delving into the change implementation plan for the integrated approach solution, it is important to close out Chapter Two with a discussion on leadership ethics.

**Leadership Ethics and Organizational Change**

Leadership ethics are integral to the change agent’s leadership practice (Ontario College of Teachers and The Catholic Principals’ Council of Ontario, 2008) – whether in the planning, the implementation, or the evaluation stage. Bowen, Bessette and Chan (2006) state that “at the core of an understanding of ethics lie (sic) an appreciation for and a willingness to consider the perceptions of others” (p. 3). Interestingly, a second look at this statement and the word “ethics” could be substituted with “interdisciplinarity” and the meaning of the statement would remain congruent because Bowen, Bessette and Chan (2006) state that leadership ethics requires a multiperspectival approach just as interdisciplinarity requires the integration of multiple perspectives. Interdisciplinary explorations are not possible without be willing to consider the
perceptions of others. The complexity enters because the change agent recognizes the challenge for disciplinarians to consider the perceptions of other disciplines and to take the step of integration.

**Ethical priorities.**

With regards to this OIP, the main considerations for acting ethically include:

- recognizing the influence of the disciplinary orientation and bias of the change agent;
- attending to psychological safety; and
- remembering the student voice.

The first two bullet points are woven throughout this entire Organizational Improvement Plan and are further examined below followed by an exploration of the process of ethical decision-making. The ethical responsibility to remember the student voice is less prominent throughout this OIP but no less important. The student voice is incorporated into the adaptive leadership behaviour of protecting leadership voices from below (Heifetz & Laurie, 1997) and the awareness-raising campaign – both discussed in this chapter. Additionally, the communication plan outlined in Chapter Three (see Table 8) recognizes a customized message specific to students and communication vehicle.

To act ethically, as listed above, the change agent must be self-aware that they are not in a neutral position (Bowen, Bessette & Chan, 2006; Strober, 2011) and recognize the influence of their own disciplinary orientation and bias (Strober, 2011). To act ethically is to not only be aware of this but to communicate it widely. In so doing, the change agent models to others the desired behaviour for entering into interdisciplinary conversations and helps form the new organizational culture (Northouse, 2016). Kezar (2018) states that “every change process is value- and interest-laden, and fraught with ethical choices and dilemmas” (p. 23). As this OIP
takes a cultural theoretical perspective to introducing interdisciplinarity, the values and interests of College X and all the disciplinary subcultures are prominent and will be challenged through the change process. Leaders have an ethical responsibility to consider how changes affect followers (Northouse, 2016). As discussed in detail throughout this OIP, attending to psychological safety is a central requirement. However, Kezar (2018) points out that, in doing so, conversations should not be achieved by excluding the resistors or cynics. In fact, seeking out their input is not only an ethical response but results in reduced resistance to change initiatives (Kezar, 2018). It will be important to underscore for all involved the cultural similarities rather than focus on the differences – as there are more of the former than the latter (Kezar, 2018).

**Ethical process.**

Kezar (2018) presents a number of processes that augment ethical practices:

- stakeholder participation and input;
- broad information sharing;
- full disclosure of direction and vision, including pluses and minuses;
- trust and open communication;
- acknowledgement of differing values and interests;
- cocreation through ongoing dialogue;
- transformational not charismatic leadership; and
- organizational justice. (p. 35)

What is interesting about this list is the application to both the communication plan (at the macro level) and the Community of Transformation (at the micro level) which highlights the centrality of these activities to an ethical approach. For instance, the ethics of being in a position of power must be considered and the change agent has an obligation to provide full disclosure of the direction and vision for change – including the positive and negative elements of introducing interdisciplinarity. Trust and open communication must be protected between the change agent and others as well as in the interactions between COT participants. An ethical process includes acknowledging the differing values and interests represented by various disciplines and while
these values may not be identical, new values and approaches can be cocreated to respect the differences.

To enact an ethical process as described above, Northouse (2016) presents five principles of ethical leadership. As shown in Figure 2, the theoretical framework and leadership approaches of this Organizational Improvement Plan integrate well with these principles.

![Figure 2. Principles of ethical leadership (adapted from Northouse, 2016) in relation to the Problem of Practice.](image)

In looking at each of the components of the Northouse (2016) framework, there are obvious connection points with the theoretical framework and leadership approaches of this OIP. Each of these is discussed below:

- **Respects others** – values all disciplinary perspectives and assists people to extend their disciplinary orientation to an interdisciplinary one;
- **Serves others** – the change agent role is to be a conduit of change and to supply the support needed to help others change their perceptions/beliefs;

- **Shows justice** – uses an adaptive leadership lens to protect leadership voices from below (Heifetz, 1994; Heifetz & Laure, 1997); uses a distributed leadership (Gronn, 2002) perspective to cocreate the solution;

- **Manifests honesty** – exhibits integrity which is central to College X’s values; speaks authentically about the challenges related to moving to an interdisciplinary perspective;

- **Builds community** – utilizes a Community of Transformation model; creates psychological safety; respects a distributed leadership approach; develops a common goal/shared vision;

Therefore, the Northouse (2016) principles of ethical leadership provide a compass for the change agent to ensure that they are not only leading successful change but doing so in an ethical way and in a manner that is congruent with the conceptual framework identified in Chapter One. This is critical as leadership ethics encompasses all that the change agent says and does throughout the entire change process.

**Chapter 2 Concluding Thoughts**

Schein (2017) reminds the reader that change management involves more than just the actual change but also includes the process of change. Hence, Chapter Two explored both the “how” of change and the “what” of change. Chapter Two accentuated all aspects of the conceptual framework starting with cultural theory (Schein, 2017) which provides the central focus as an overarching theoretical lens. In order to be responsive, it is imperative to understand the culture of College X and Schein’s (2017) three stages of change provide the change agent
with a path forward. It is during the discussion of Schein’s stages of change that the concept of psychological safety is explored which is a central concept within this OIP.

Adaptive leadership (Heifetz & Laurie, 1997) provides further tools for addressing the challenges of change that requires shifting mindsets to move from a disciplinary to an interdisciplinary orientation. Heifetz and Laurie (1997) provide six behaviours that adaptive leaders need to employ. Moreover, adaptive leadership integrates well with distributed leadership. Gronn (2002) advocates for a new approach to shared leadership in higher education institutions and his distributed leadership approach aligns with the cultural orientation of College X towards consultation and collaboration. Analyzing College X through these theories and frameworks illuminates multiple possible solutions, one of which is the most responsive and reasonable for the realities of College X. This solution (Solution Three – the integrated approach) will be explored in detail in the following chapter.
Chapter 3 – Implementation, Evaluation and Communication

Recalling the conceptual framework introduced in Chapter One (see Figure 1), the desired outcome of this OIP is an evidence-based approach to changing perceptions and beliefs that attends to psychological safety and creates a suitable climate for the implementation of interdisciplinary teaching and learning. The following chapter examines the third proposed solution of the “integrated approach” (see Chapter Two). The short-, medium- and longer-term goals in the change implementation plan (see Table 6) are based on the change path proposed by Schein (2017). Additionally, Schein’s (2017) focus on psychological safety plays a significant role in the monitoring and evaluation plan that is also delineated in this chapter. Heifetz and Laurie (1997) provide a leadership approach that supports the level of transformative change found in the change implementation plan and lends itself to providing for psychological safety as does Gronn’s (2002) distributed leadership provides an approach to implementation that respects the collaborative culture of College X. Sensemaking activities, proposed by Kezar (2018), aid in communicating the change plan to various stakeholders, an important step in an effective change process. Finally, Chapter Three concludes with a review of next steps and future considerations.

Change Implementation Plan

Using Schein’s (2017) cultural theory as the theoretical framework, the change implementation plan flows from the organizational analysis outlined in the previous chapters. Kezar (2018) creates the linkage between the change implementation plan and cultural theory when she states,

Cultural theories suggest that the major obstacles to change will emerge when the values and underlying beliefs associated with change initiatives violate existing cultural norms or fall outside of them…[it requires] helping people appreciate and understand the new values and beliefs that are being introduced, and to reconcile them with existing values and beliefs that may conflict with them. (p. 197)
In support of Kezar’s (2018) assertion, the following section explores various stakeholders’ reactions to change, identifies the stakeholders that need to be engaged, outlines the short-, medium- and long-term goals and timelines required for building momentum, further describes the resource requirements and, finally, acknowledges the implementation issues. At the heart of the Problem of Practice is the gap that exists at College X where students graduate with strong disciplinary knowledge but have limited opportunities to explore interdisciplinarity even though increasingly complex problems require interdisciplinary solutions (Busch, 2017; Buller, 2015; Strober, 2011; Dailey-Hebert & Dennis, 2015; Spelt, Biemans, Tobi, Luning & Mulder, 2009) from collaborative-ready employees (Royal Bank of Canada, 2018; World Health Organization, 2010). However, the Problem of Practice also recognizes that a shift away from disciplinary thinking to an interdisciplinary orientation means disturbing disciplinary identities. That entails influencing the culture and subcultures at College X and prodding them towards identifying with a new cultural orientation – that of interdisciplinarity.

**Understanding stakeholder reactions to change.**

As Kezar (2018) insightfully identifies, understanding how individuals and groups have reacted to earlier change efforts – as well as the barriers that emerged and values that surfaced – is critical to a change agent’s success. Therefore, understanding stakeholder reactions to change is not just an exercise in projecting forward but also in looking back. As stated earlier, College X has not experienced a lot of change within the academic division prior to the last year. Therefore, it can be anticipated that reactions to change could be related both to the content of the change but also to the mere existence of change. Buller (2015) highlights the importance of the human implications of change. This approach is consistent with the change agent’s leadership approach
and the change agent must seek to understand stakeholder reactions and consequently adjust plans during the implementation process to reflect legitimate concerns.

There are three identified checkpoints for stakeholder feedback to better gauge the comfort level with regards to the proposed change:

1. **Interdisciplinarity in general** – Prior to any intentional movement towards interdisciplinarity, it will be important to understand, at a high level, what faculty and academic administrators understand the term to mean because there is not a consensus on the definition (Lattuca, 2002). This type of stakeholder engagement could easily be included as part of the awareness-raising promotional strategy where initial interest and conversation is encouraged. Stakeholder (in the most general sense) reactions will be better understood if the baseline knowledge of the topic is ascertained.

2. **Community of Transformation experience** – A select group of faculty will participate in a Community of Transformation (as described in this chapter as well as the previous chapter and in the Appendices). Within this COT experience, will be the strongest need for the change agent to gauge stakeholder reaction to change. Schein’s (2017) focus on psychological safety forms the basis for reading and managing stakeholder reactions. Schein (2017) also identifies stakeholder resistance to change comes from learning anxiety generated by multiple potential fears. Of these, the fears of losing power, feeling less capable, losing one’s identity and/or losing membership within a particular group (p. 326) are very understandable related to moving from a disciplinary to interdisciplinary mindset.
3. Implementation of new interdisciplinary curriculum initiatives – While the scope of this OIP is focused on creating the conditions for a psychologically safe environment to navigate the disequilibrium of interdisciplinary explorations, it is worth noting that the ultimate goal is the implementation of new interdisciplinary curriculum initiatives across the College. The faculty – as well as the student – perspective will be important to assess and monitor when the change is ultimately implemented.

To influence the various stakeholders, it will be important to consider the various personnel to engage in the change process and how to incorporate them.

**Selecting personnel to engage.**

The change agent cannot work alone. Working within an institution that has a high expectation for consultation and collaboration, a distributed leadership strategy becomes vital. Buller (2015) reminds change agents that “faculty members don’t view change as an issue affecting the [higher education institution], they view it as an issue affecting *them*” (p. 18). Therefore, sharing decision-making with faculty, as possibly, is a constructive leadership approach. Faculty will be enabled through the Community of Transformation model (Kezar et al., 2018) which provides the necessary training and support requisite for empowerment (Kezar, 2018). The change agent will provide the general parameters/structure of the program and provide both the space and activities that protect psychological safety; however, the interdisciplinary experiences will be generated by faculty within the supportive environment of the Community of Transformation.

Choosing members for the Community of Transformation will involve identifying those who have expressed an interest in interdisciplinarity and/or have experimented already with how
to introduce an interdisciplinary element to their course(s). Newell (1994) identifies some key considerations for choosing faculty:

Selecting a genuinely interdisciplinary team requires consideration not only of the expertise of possible participants but also of their personalities. For example, one needs to consider whether potential participants are open to diverse ways of thinking, ways of absolutism; able to admit that they do not know; good at listening; unconventional, flexible, willing to take risks, self-reflective, and comfortable with ambiguity. Those who are not may not be appropriate for interdisciplinary teaching (Trow, 1984-1985). (p. 37)

An application process to engage in the interdisciplinary Community of Transformation professional development opportunity could be managed through the Teaching and Learning Centre as an extension of the faculty development opportunities currently offered. In this instance, faculty interested in interdisciplinary teaching and learning would be invited to discuss their interest and rationale with their respective Associate or Campus Dean. The application package would include the information found in Appendix 1 and 2.

Building momentum.

Organized around Schein’s (2017) stages of change, Table 6 outlines the short-, medium- and longer-term goals for the “integrated program” solution. Each goal is broken down into the more detailed steps required for the implementation process and identifies potential implementation issues. Table 6 reiterates and expands upon the resource requirements identified in Chapter Two and the chart also itemizes the goals, relevant stakeholders and timelines associated with each of Schein’s (2017) stages. Additionally, Table 6 itemizes the change implementation process from the very beginning stages through to the ultimate goal of widespread implementation throughout the entire College to create innovative learning opportunities that distinguishes College X from other community colleges.
Table 6

*Change Implementation Process*

<table>
<thead>
<tr>
<th>Goals/Priorities</th>
<th>Implementation Process</th>
<th>Implementation Issues</th>
<th>Resources</th>
<th>Stakeholders</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 1 – Creating the Motivation to Change (Schein, 2017) – Short-term</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Create an awareness-raising strategy that articulates the rationale for interdisciplinarity to specific audiences and results in (a) a shared vision of what interdisciplinarity means at College X (b) the identification of participants for a Community of Transformation as well as (c) the ongoing support and commitment of the senior executive team and (d) building trust as a foundation for creating psychological safety.</td>
<td>• Identify early adopters (that is, those who have expressed an interest in interdisciplinary conversations or explored interdisciplinarity within their courses).</td>
<td>• securing tricampus buy-in; • Dealing with high staff turnover and keeping momentum after initial buy-in is achieved; • ensuring communication messages lay the foundation for psychological safety.</td>
<td>• 25% offload for Project Lead (change agent) to oversee implementation ($35,000/year); • promotional materials ($5,000/year); • tricampus travel ($750); and • incentives ($1,000).</td>
<td>• change agent; • senior Executive Team; • faculty; and • college as a whole</td>
<td>Spring semester</td>
</tr>
<tr>
<td>Goals/Priorities</td>
<td>Implementation Process</td>
<td>Implementation Issues</td>
<td>Resources</td>
<td>Stakeholders</td>
<td>Timeline</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>-----------</td>
<td>-------------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>• Identify the data to be collected during the initial iteration in order to justify to various stakeholders (faculty, colleagues, senior executive team) the success of the initial rollout and provide rationale for an extended rollout across the College.</td>
<td>whole, faculty recruits, senior executive team. • Map out the concentrations of faculty interest – what campuses? Schools? What programs? • Identify data to collect (with an eye to knowledge mobilization).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage 2: Learning new concepts, new meanings of old concepts, and new standards of judgment (Schein, 2017) – Medium-term</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Establish a two-phase COT (through the Teaching and Learning Centre) that provides a psychologically safe and evidence-based program to explore interdisciplinarity. • Establish parameters for the Scholarship of Teaching &amp; Learning (SOTL) support so that faculty engage in the</td>
<td>• Develop and rollout a COT model – phase 1. • Develop and rollout a COT model – phase 2. • Develop and support ID applied research. • Develop and support ID innovation centre activities. • Identify applied research opportunities with an ID component and rebrand as interdisciplinary.</td>
<td>• keeping Senior Vice President, Academic informed as all named departments report into this position (Teaching and Learning Centre, Applied Research, Innovation Centre); • support of Senior VP, Academic; • 25% offload for Project Lead/change agent to oversee implementation ($35,000/year); • budget allocation for phase 1 and 2 of the COT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• change agent; lead managers from Teaching and Learning Centre, Applied Research, Innovation Centre;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fall and Winter semester</td>
</tr>
<tr>
<td>Goals/Priorities</td>
<td>Implementation Process</td>
<td>Implementation Issues</td>
<td>Resources</td>
<td>Stakeholders</td>
<td>Timeline</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------</td>
<td>-----------------------</td>
<td>-----------</td>
<td>--------------</td>
<td>---------</td>
</tr>
<tr>
<td>scholarly pursuit of interdisciplinary and mobilize knowledge for the advancement of interdisciplinary.</td>
<td>• Rebrand Innovation Centre activities with an ID component and rebrand as interdisciplinary.</td>
<td>• Considering psychological safety in the development of the COT; working with multiple other departments may slow the implementation process down; and monitoring timelines (for instance, will there be sufficient implementation time?).</td>
<td>($5,000/faculty x 10 faculty x 2 semesters = $100,000); and budget allocation for resources for COT participants (SOTL and applied research offloads = $5,000 x 10 faculty/year = $50,000).</td>
<td>• faculty; • senior Executive team; and • college as a whole</td>
<td></td>
</tr>
<tr>
<td>Goals/Priorities</td>
<td>Implementation Process</td>
<td>Implementation Issues</td>
<td>Resources</td>
<td>Stakeholders</td>
<td>Timeline</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Stage 3: Internalizing New Concepts, Meanings, and Standards (Schein, 2017) – Longer-term</td>
<td>• Evaluate the effectiveness of the COT and adapt based on data.</td>
<td>• considering the availability of students as many students finish at end of winter semester and, therefore, could limit the student evaluation component; and considering timelines and whether enough activity will have happened at the end of two semesters to provide useful feedback.</td>
<td>• 25% offload for Project Lead/change agent to oversee implementation ($35,000/year).</td>
<td>• change agent; • COT faculty; • senior executive team; and • college as a whole.</td>
<td>Spring semester and ongoing rollout.</td>
</tr>
<tr>
<td>• Through SOTL, engage in knowledge mobilization activities externally and internally to expand the application of interdisciplinarity.</td>
<td>• Extend to include more programs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Based on lessons learned from stakeholder evaluation/feedback, expand interdisciplinary options to additional courses and opportunities as identified through stakeholder feedback analysis and celebrate successes across the college to maintain momentum and to honour the celebratory culture at College X.</td>
<td>• Evaluate if any of possible solution 4 is feasible – particularly the QA systems – to further support ID conversations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The aforementioned change implementation chart (Table 6) provides a reference point for subsequent sections in this chapter related to monitoring and evaluation as well as communication. However, first it is very important to acknowledge the limitations to the plan in order to have a realistic picture of the change process.

**Acknowledgement of limitations.**

No matter how robust the change implementation plan, the change agent must remain cognizant of, and attentive to, a number of challenges. For instance, the change agent does not have formal authority over those leading the three key departments identified in Table 6: the Teaching and Learning Centre, the Applied Research Department, nor the Innovation Centre. Without a compelling rationale and the buy-in of the senior academic administrator, the change implementation plan is limited. Also, as Kezar (2018) points out, “often people…forget that new employees are constantly joining organizations and leadership turns over. So, the process of helping people to understand the change being implemented and overcoming resistance is an ongoing process” (p. 196). Currently College X is experiencing a high rate of staff turnover due to retirements. While there may be early acceptance of this plan, new employees will not have the same access to the background rationale and may not have the same buy-in to the importance of interdisciplinarity. Ongoing communication will be necessary and archival information kept for new employees to access. The benefit of intentional communication to new employees about interdisciplinarity is that new employees would begin their new roles with the expectation that interdisciplinarity is important at College X which could strengthen the overall buy-in.

Another challenge is the reality of the academic cycle and that, typically, the May/June period is the time when faculty immerse themselves in course development work. To have faculty focus on interdisciplinarity and the Community of Transformation work outside of this
limited time frame will require offloading faculty from teaching responsibilities which comes as a financial cost to their academic program. When there is an opportunity cost like this, senior executive buy-in is crucial. They will have to be convinced of the importance of interdisciplinary learning as a conduit for meeting key strategic objectives as set out in the Strategic Plan.

The workload implications could also be a concern for the union if they feel that the College is implementing a new approach to teaching with workload implications not easily interpreted within the confines of the collective agreement. Another practical consideration is the tricampus nature of College X. The Community of Transformation will need to build in flexibility if COT members exist beyond the borders of one campus. Fortunately, there is precedent for this as the New Full-time Faculty Professional Development program brings together faculty from all three campuses (virtually and in person). The virtual component will also be an issue when it comes time to implement interdisciplinary initiatives that span more than one campus and will not just be an issue in the Community of Transformation planning stage.

Interdisciplinary studies is more common in the university sector and this is understandable if one considers that students need to have a disciplinary understanding before they can integrate their knowledge in an interdisciplinary capacity. That means that the shorter credential length of many college programs is a limitation as there is less time to both build the disciplinary foundation and move into integrative activities. Other issues to be considered includes scheduling (again both of the Community of Transformation and the actual implementation of the interdisciplinary idea). A potential further limitation, outside of the aforementioned practical ones, will be addressing conflicts that cannot be successfully navigated or overcome through provisions for psychological safety. It will be important to provide natural exit points to permit faculty to gracefully remove themselves (possibly to rejoin at a later date)
and retain the central value placed on psychological safety. The concept of psychological safety (Schein, 2017) dominates the change process monitoring and evaluation plan which is outlined in the next section.

**Change Process Monitoring and Evaluation**

The following section reviews the specific goals listed in each stage of the Change Implementation Plan (see Table 6) and describes the outcomes or impacts as well as the tools for gauging progress and for determining how to refine the plan. First, a summary is provided in chart form (see Table 7) followed by a detailed description related to each of Schein’s (2017) three stages.

Table 7

*Summary of Monitoring and Evaluation Plan*

<table>
<thead>
<tr>
<th>Stage in the Change Management Process (Schein, 2017)</th>
<th>Outcomes and Impacts (“what”)</th>
<th>Tools/Measures to Track, Assess Change, and Refine Plan (“how”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1 – creating the motivation to change</td>
<td>• Community of Transformation participants recruited from more than two disciplines; financial support and the commitment of the senior executive team secured for the proposed solution; and identification of data that can be collected in order to measure success and determine if an extended rollout across the College is possible and what adjustments would be needed.</td>
<td>• awareness-raising campaign with regards to interdisciplinarity and the COT process; briefing notes and progress reports provided to senior executive team; and input from stakeholders on data to be collected and means for collecting (COT participants, senior executive leader of academic division, and from departments leaders from Applied Research, the Innovation Centre, and Teaching and Learning Centre).</td>
</tr>
<tr>
<td>Stage 2 – learning new</td>
<td>• participant’s sense of psychological is monitored</td>
<td>• formative feedback conversations with COT participants;</td>
</tr>
<tr>
<td>Stage in the Change Management Process (Schein, 2017)</td>
<td>Outcomes and Impacts (&quot;what&quot;)</td>
<td>Tools/Measures to Track, Assess Change, and Refine Plan (&quot;how&quot;)</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>--------------------------------</td>
<td>-------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| concepts, new meanings of old concepts, and new standards of judgements | during the Community of Transformation experience is monitored  
- data collected on the number of projects within the Applied Research and Innovation Centre that are interdisciplinary in nature. |  
- cocreated group norms;  
- pre- and post-surveys of COT participants;  
- observation of group interactions; and  
- documentation of the number of Applied Research and Innovation Centre projects, and SOTL projects. |
| Stage 3 – internalizing new concepts, meanings, and standards |  
- data reviewed and refinements made;  
- knowledge mobilization directed to both internal and external audiences and results shared with both. |  
- COT participants provide feedback through focus groups to review data collected during Stage 2 (see above);  
- progress reports (senior executive leader of academic division, college as a whole);  
- summary report with recommendations for larger scale implementation of interdisciplinary explorations across College X; and  
- article(s) published in peer-reviewed journal. |

Table 7 provides a summary which is further expanded upon below, stage by stage and goal by goal.

**Stage 1: Creating the motivation to change (Schein, 2017).**

The Change Implementation Plan (see Table 6) identified two short-term goals/priorities: an awareness-raising strategy and a data collection plan. The awareness-raising strategy is necessary to articulate the rationale for interdisciplinarity and to create disequilibrium for specific audiences: the senior executive team, academic administrators, faculty, college in general (including students). What constitutes disequilibrium, or the motivation to change, will
be different based on the stakeholder. A faculty member will not likely have the same response to an underlying issue as, for instance, a senior executive member and this will require more customized messages, a topic covered later in this chapter in the communication plan section. The primary outcomes to be tracked and evaluated to determine the success of the awareness-raising goal are:

- the recruitment of faculty from more than two disciplines to join the Community of Transformation; and
- securing financial support and the commitment of the senior executive team for the proposed solution.

In addition, Stage 1 includes the identification of data that will need to be collected during the initial iteration to justify to various stakeholders (faculty, colleagues, senior executive team) if the initial iteration was successful and provide the rationale for an extended rollout across the College – including recommendations for refining the implementation plan. The actual data collection will not happen until Stage 2; however, it will be important to have a plan in place so that the necessary data is collected during Stage 2. As Table 7 suggests, data collection will be in the form of surveys, more informal formative feedback, and observation. In addition, it will be important to collect information on, but not limited to: the number of SOTL projects proposed and completed; number of interdisciplinary applied research projects proposed and completed; number of interdisciplinary Innovation Centre activities that are offered; faculty satisfaction with COT experience; number of interdisciplinary projects and courses that are proposed and designed.
Stage 2: Learning new concepts, new meanings of old concepts, and new standards of judgement (Schein, 2017).

Tending to psychological safety is central to dealing with learning anxiety (Schein, 2017) and, therefore, central to the effectiveness of this stage. Strober (2011) in her book *Interdisciplinary Conversations: Challenging habits of thought* highlights that “one of the most important prerequisites for productive interdisciplinary dialogue is trust” (p. 161) and that “an effective leader must be skilled at creating trust and resolving interpersonal conflict” (p. 117).

Psychological safety is built into several of the steps identified by Heifetz and Laurie (1997) with regards to adaptive leadership – namely, regulating distress, giving the work back to the people, and protecting leadership voices from below. While not explicitly identified as a concept of distributed leadership (Gronn, 2002), the collective nature of this leadership approach which values the input of others and honours the equal validity of contributions made by all individuals supports psychological safety.

There are four medium-term goals as shown in the Chand Implementation Plan (see Table 6): one addressing the creation of the Community of Transformation and three goals dealing with the rebranding and adjustments to College X departments already in existence. With regards to the monitoring of the Community of Transformation, it will be crucial to consider the psychological safety of participants because disrupting disciplinary boundaries will certainly create upheaval. Schein (2017) provides direction for monitoring and evaluating psychological safety with his list of eight critical activities:

1. provide a compelling positive vision
2. provide formal training
3. involve the learner
4. train relevant “family” groups and teams
5. provide resources
6. provide positive role models
7. provide support groups in which learning problems can be aired and discussed
8. remove barriers and build new supporting systems and structures (p. 328-329)

The Community of Transformation takes these eight activities into consideration in the following ways:

1. **Provide a compelling positive vision** – Schein (2017) starts his list with the assertion that “the targets of change must come to believe that they and the organization will be better off if they learn the new way of thinking” (p. 328). While a vision for interdisciplinarity will already have been created to begin the change process, the leadership approach of adaptive and distributed leadership requires that the change agent check in with COT participants to monitor their buy-in for the new vision.

2. **Provide formal training** – the Community of Transformation will provide the professional development needed. However, it will be critical to monitor and evaluate if learner needs are being met. This can be done formatively and informally as well as formally as described next.

3. **Involve the learner** – Pre- and post-surveys using a likert scale can gauge the comfort level of participants and also their receptivity to the cultural change that comes with interdisciplinarity. By cocreating group norms (with regular times of checking in to ensure norms are upheld) and by listening to gauge faculty’s receptiveness to learning content, the learner is also regularly involved and the distributed leadership approach is respected. Finally, another monitoring strategy will be to determine together the prompt word(s) that participants can use to indicate distress with the direction of the conversation during the COT experience.

4. **Train relevant “family” groups and teams** – As Schein (2017) points out “cultural assumptions are embedded in groups, informal training and practice must be provided to
whole groups so that new norms and new assumptions can be jointly built” (p. 329). It will be necessary to monitor the tension created between the current disciplinary cultures and the desired interdisciplinary culture.

5. **Provide resources** – Schein (2017) states “learners cannot learn something fundamentally new if they don’t have the time, the space, the coaching, and valid feedback on how they are doing” (p. 329). Therefore, it is important to evaluate faculty receptiveness to the adequacy of resources provided (over and above the formal training) and adjust as needed.

6. **Provide positive role models** – Faculty participants may need to be able to see what interdisciplinary conversations look like before they can imagine themselves engaging. Furthermore, it will be important to provide faculty with some agency to identify where they see these behaviours in action and who the role models might be. Checking in with faculty during the COT experience will help monitor faculty’s needs for role models.

7. **Provide support groups in which learning problems can be aired and discussed** – This is the whole premise upon which the COT approach is predicated. However, it must be evaluated if the goal is being met and hence the need for collecting ongoing feedback. Cocreating guiding norms so that faculty can share their learning frustrations and difficulties also provides the opportunity to air issues safely.

8. **Remove barriers and build new supporting systems and structures** – Post-Phase 2, it will be necessary to evaluate the faculty experience in order to identify the systemic issues that interfered with interdisciplinarity. There will need to be a mechanism for capturing this information and then resolving the issues which will likely require a “whole college” approach as many of the issues will reside with departments outside the
academic division (for example, scheduling, facilities, Human Resources, Records).

While this is beyond the scope of the proposed solution, it is identified in Proposed Solution #4 (Chapter Two) and Next Steps (the conclusion of Chapter Three).

The central importance of attending to psychological safety is summed up by Schein (2017):

> When we consider the difficulty of achieving all eight conditions and the energy and resources that have to be expended to achieve them, it is small wonder that changes are often short-lived or never get going at all. However, when an organization sets out to really transform itself by creating psychological safety, real and significant cultural changes can be achieved. (p. 330)

Therefore, psychological safety is central to the success of this Organizational Improvement Plan and must be routinely and intentionally monitored and evaluated in order to safeguard the success of the change implementation.

The medium-term goals of Phase 2 also deal with the rebranding and refocusing of the Applied Research Department and the Innovation Centre as well as growth in the area of SOTL at College X through the Teaching and Learning Centre. Quantitatively, data will be collected with regards to the number of projects within each department bearing the title or description of being interdisciplinary.

**Stage 3: Internalizing new concepts, meanings, and standards (Schein, 2017).**

It has already been established that this Problem of Practice represents a second order change. According to Kezar (2018) there are two ways to measure this. One is by reviewing the cultural changes and Kezar (2018) points to measures like a change in language or changes in how people interact with each other. This change will be measured through observation by the change agent as well as in the post-COT survey of participants. One of the goals in Step 3 is to evaluate the effectiveness of the Community of Transformation and adapt based on data collected. Accordingly, the post-Community of Transformation likert scale survey will help
identify attitudinal shifts in receptivity towards interdisciplinarity. Through a focus group process, COT participants will review the data and provide an additional interpretive lens. The survey will have no identifying information and the results will be collected and stored following College research policy with the change agent alone having access to the data.

The Change Implementation Plan shown in Table 6 also identifies that, through SOTL, College X will engage in knowledge mobilization activities externally as well as promoting lessons learned internally to expand the application of interdisciplinarity in new ways. The data anticipated (Stage 1) and collected (Stage 2) will be used to understand the successes and gaps and how the change implementation plan can be refined and expanded to additional courses and opportunities.

Just as the change implementation plan provides the context for the monitoring and evaluation plan, the approach to communicating the need for change is similarly linked. The next section provides greater detail about the communication plan.

**Communicating the Need for Change and the Change Process**

Communication involves, at the outset, building awareness of the need for change and then, throughout the process, continuing to communicate what is required for successful implementation. In both cases, messages need to be customized to the needs of the various stakeholders. The stakeholders listed in the Change Implementation Process can be divided into five groups (see Table 8) along with the type of communication they each require and the vehicle for communicating the message:
Table 8

*Customizing the Message and the Communication Vehicle to the Stakeholder*

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>What they need to know</th>
<th>Communication vehicle</th>
</tr>
</thead>
</table>
| Senior Executive Team                                                     | • customized rationale of need for interdisciplinarity with regards to disequilibrium (Schein, 2017) and the importance of interdisciplinarity for meeting the college’s mission, values and Strategic Plan objectives;  
  • updates and recommendations with regards to the operational readiness and operational realities for supporting interdisciplinarity; and  
  • ongoing communication about successes.                                                                                                                                  | • presentations;  
  • progress reports.                                                                                                                                                                                                              |
| Faculty                                                                   | • awareness for interdisciplinarity;  
  • customized rationale for the need of interdisciplinarity with regards to disequilibrium (Schein, 2017); and  
  • invitation to join a COT experience to explore and cocreate interdisciplinary initiatives through the COT.                                                                                                                   | • Presentations by the change agent and peer champions;  
  • progress reports.                                                                                                                                                                                                              |
| Academic Administrators from Teaching and Learning Centre, Innovation Centre, and Applied Research | • awareness for interdisciplinarity;  
  • customized rationale for the need of interdisciplinarity with regards to disequilibrium (Schein, 2017); and  
  • overview of the adjustments that will create interdisciplinary opportunities within their departments.                                                                                                               | • one-on-one meetings with change agent;  
  • communication from senior executive member responsible for the academic division; and  
  • progress reports.                                                                                                                                                                                                              |
| College as a whole                                                        | • rationale of the need for interdisciplinarity and the importance of interdisciplinarity for meeting Strategic Plan objectives.                                                                                                                                                                                                                     | • presentations;  
  • progress reports.                                                                                                                                                                                                              |
| Students                                                                  | • rationale of the need for interdisciplinarity and the importance of interdisciplinarity for teaching future essential employability skills and the employer demand.                                                                                                                                                | • awareness-raising campaign.                                                                                                                                              |
Regardless of the stakeholder, ultimately the communication plan is about helping people to change from a mindset that is discipline-oriented to one that is interdisciplinary. Such change challenges people to adjust their values, perceptions, and beliefs – in short, to change their culture. In the following section, the approach taken to the task of communication is sensemaking, an approach that helps people create new meaning and understand disruptive situations in order to maximize the potential for change (Degn, 2015; Weick, 1995). It is collaborative in nature (Cunliffe & Coupland, 2012) which fits well with a distributed leadership approach.

**Taking a sensemaking approach to communication.**

Sensemaking quite literally means making sense by working through one’s assumptions through an examination of the available cues. It results in one of two outcomes: either new meaning is attached to familiar ideas, or new concepts, and associated language are created (Kezar, 2018). As previously stated, one’s discipline contributes to how one sees the world. The proposed change at College X is an example of second-order change because major adjustments to faculty’s underlying values, beliefs, and principles will be required as they move away from a purely disciplinary way of thinking to one that is interdisciplinary. Sensemaking is a tool for achieving second-order change (Kezar, 2018) as it provides opportunities for faculty to work through the differences in their values and assumptions in relation to other represented disciplines leading to changes in behaviours, values, mindsets (Eckel & Kezar, 2003).

Kezar (2018) states that, “Studies demonstrate that sensemaking is facilitated by change agents that can create vehicles for social interaction, help introduce new ideas into the organization, provide opportunities for social connection, and effectively use language and communication to help facilitate people’s evolving thinking” (p. 88). Therefore, a sensemaking
approach to communication is critical to the success of this change implementation plan. The communication plan must articulate \textit{why} (during the awareness-raising communication phase targeted to the larger organization and differently targeted to the senior executive team for their support) and the \textit{how} people are to make sense of the changes and the requisite modifications to their values, beliefs, perceptions (during the implementation phase targeted at Community of Transformation participants).

\textbf{Enacting sensemaking strategies.}

The action of sensemaking is inevitably communicative. Kezar (2018) creates the connection between sensemaking and communication by stating that “vehicles for change involve facilitating human interaction and creating conversations, collaboration and communication to help people to question their assumptions and increase their exposure to new ideas or values” (p. 90) and she provides a number of sensemaking tools:

- ongoing and widespread campus conversations;
- collaborative leadership;
- developing cross-departmental teams or working groups;
- sponsoring faculty and staff development opportunities; and
- drawing on and discussing external ideas. (Kezar, 2018, p. 92)

Each of these tools will be discussed below in relation to the communication plan.

\textbf{Ongoing and widespread campus conversations} provide the opportunity to communicate and create awareness about the topic of interdisciplinarity and to create a shared vision. This is the time to start building a shared language about how College X defines the term (that is, with an emphasis on the integration of two or more disciplines rather than just exposure to multiple disciplines). This activity is important as Kezar (2018) indicates that it is “through conversations…faculty, staff, and administrators can develop common language and consensus about ideas; they can work to reframe key concepts” (p. 93). In a gentle, nonthreatening way,
these campus conversations provide the opportunity to openly name the potential challenges that occur when moving from discrete disciplinary identities to a shared interdisciplinary one. It will be important for the change agent to affirm the message that all voices are important to the conversation (an important early step for protecting psychological safety). For both the general College X audience and the specific senior executive team audience, now is the time to also create connections between the outcomes of interdisciplinarity and key strategic objectives in the College X strategic plan. The college-wide conversations provide a natural time to celebrate and showcase the successes of early adopters of interdisciplinary approaches, so these people are known to their peers.

**Collaborative leadership** is a second tool that Kezar identifies. In some literature, collaborative leadership and distributed leadership are interchangeable terms. As mentioned earlier, collaborative leadership aligns with tenets of adaptive leadership; specifically, the need to protect leadership voices from below and give the work back to the people (Heifetz & Laurie, 1997) because “collaborative leadership means involving people in more than a token way, providing them with authority, decision-making power, influence, or some other means of shaping the change process to enable them to exercise agency” (Kezar, 2018, p. 94). Earlier it was established that decision-making resides with administration in the Ontario college system so decision-making power cannot be systematically put in the hands of faculty. Therefore, this OIP considers other ways for faculty to shape the change process. In terms of the communication plan, collaborative leadership reminds the change agent of the need to check in regularly and work with College X community members to cocreate the implementation strategy. The change agent needs to ensure that the message is clearly heard that this is a change process to be developed together rather than a prescriptive, top-down approach. Kezar (2018) also notes the
reality that engagement grows deeper the more people are involved because the level of questioning deepens. It will be important for the change agent to anticipate that this may also be a tension point where psychological safety becomes even more important to protect.

**Developing cross-departmental teams or working groups** is a critical part of any interdisciplinary initiative. It is not possible to address this Problem of Practice apart from cross-departmental activities. The action of interacting in cross-departmental ways, then, not only creates opportunities for interdisciplinarity but it is the key ingredient for cultural change. According to Kezar (2018) “cross-fertilization of ideas [are needed]…to encourage the exchange of ideas and loosen tightly held assumptions” (p. 94). Therefore, cross-departmental teams are both the vehicle and the desired outcome.

**Sponsoring faculty and staff development opportunities** is the sensemaking activity that shapes the Community of Transformation experience. The need for change and the plan for addressing the change will be clearly communicated within the curriculum of the Community of Transformation (see Appendix 1). The sensemaking activities of faculty development and collaborative leadership combine in the Communities of Transformation as the proposed approach involves cocreating a vision as well as group norms. The COT will be an immersive experience that will provide tools for faculty to make sense of interdisciplinarity, to grapple with their own disciplinary identity and then to navigate, with colleagues, the disciplinary influences on their pedagogical approaches. The message that will be communicated and woven throughout the Community of Transformation experience will be the reality that disrupting disciplinary boundaries is challenging work.

Kezar (2018) highlights one final sensemaking activity – **drawing on and discussing external ideas**. This could entail, for instance, communicating the need for change or the
opportunities for change by bringing in a speaker from somewhere else. At College X, that could be an alumnus who works on an interdisciplinary team or it could be a faculty member from another higher education institution with a developed interdisciplinary structure already in place. Kezar (2018) encourages change agents to consider communicating the message about change through an outsider as “in many instances, these outsiders…have been able to ask challenging questions that were difficult for campus change agents to raise on their own” (p. 95). The information that comes from external people may also identify future ideas that have not yet been considered and will build the interdisciplinary presence at College X. In this next section, some of the next steps and future considerations are anticipated.

**Next Steps and Future Considerations**

This OIP focused on creating a culturally aligned and psychologically safe foundation for exploring interdisciplinarity and intentionally steered clear of defining and prescribing what interdisciplinary courses or projects would be implemented at College X. Therefore, the key next step is the actual implementation of interdisciplinary options for student learning. The intent is for this work to be shaped by the faculty who are interested in interdisciplinarity. Having said that, there are some potential next steps to consider, including but not limited to: team teaching, the creation of interdisciplinary general education courses (with an integrative component), microcredentials, cocurricular records.

As previously mentioned, interdisciplinary approaches in the community college system are less evident than in the university system (with a particular focus on senior undergraduate years and graduate education). This could make it difficult to find applicable opportunities for conferences or visits to other institutions. This raises another important next step at College X and that is the Scholarship of Teaching and Learning and knowledge mobilization. If an
intentional and integrated approach to interdisciplinarity is unique within the Ontario community college system (and perhaps beyond), then it will be important that the data collected as part of this Organizational Improvement Plan is shared. College X can position itself as a subject matter expert with regards to interdisciplinarity in the community college system through knowledge mobilization activities of publishing papers and presenting at conferences.

Another next step in institutionalizing interdisciplinarity at College X would be the creation of institutional learning outcomes. All courses have course learning outcomes (micro level) and all programs have program or vocational learning outcomes (macro level). Institutional learning outcomes are at the meso level and indicate the emphasis that the institution has placed on graduating students with the ability to demonstrate these additional learning outcomes. While the Ministry of Training, Colleges and Universities mandates the inclusion of specific Essential Employability Skills in college programming (MTCU, 2009), as indicated in Chapter One, there is a gap between the Ministry’s Essential Employability Skills and the future employability skills that employers have deemed essential. Institutional Learning Outcomes cannot displace Ministry-mandated Essential Employability Skills but can augment them and declare how College X is specifically meeting expressed employer needs by providing interdisciplinary experiences.

Institutional learning outcomes also provide a means for assessing the effectiveness of interdisciplinary programs (Borrengo & Newswander, 2010). Borrengo and Newswander (2010) identify five categories of institutional learning outcomes related to interdisciplinarity:

1. disciplinary grounding;
2. integration;
3. teamwork;
4. communication; and
5. critical awareness (p. 80).
What is important about this list is that these institutional learning outcomes directly align with the rationale communicated to the senior executive team about the value of interdisciplinarity to meet the essential employability skills identified for future jobs and also identified as lacking by many employers.

Part of the definition of culture includes that which is taught to new members (Schein, 2017). As was mentioned earlier, the pace of retirements and employee turnover means that this will always be an important next step to explain what interdisciplinarity at College X means. One of the opportunities for doing this is to build interdisciplinarity explorations into the professional development/onboarding activities for new faculty (Eckel & Kezar, 2003). Once there is an acceptance of interdisciplinarity and a structure in place, it will be a natural next step to create expectations for new faculty to think beyond their own discipline and to integrate this cognitive framework from the beginning of their teaching career at College X. This cannot be the only strategy for ongoing awareness and education as it will only reach new full-time faculty but it is an important next step. Other faculty and staff could benefit from being sent to other institutions and to conferences specific to interdisciplinarity as a way of keeping the conversation going.

For reasons related to resource requirements, this OIP did not explore the “whole college” approach from the list of proposed solutions provided in Chapter Two. However, if College X intends to more fully pursue interdisciplinarity, it will be necessary to deal with systems issues like scheduling, quality assurance reviews and the current limitations of student information systems. Additionally, as Ontario community colleges accelerate their development of honours bachelor degrees and applied research, it follows that the focus on academic freedom will increase and it is now on the provincial collective bargaining radar (Hogan & Trotter, 2013). It remains to be seen where this conversation will go during the 2021 collective bargaining
negotiations but it has the potential to impact the first stage in Schein’s (2017) model with regards to resistance to change.

Chapter 3: Concluding Thoughts

The implementation, evaluation and communication plans captured in Chapter Three are connected to Schein’s (2017) three stages of change introduced in the previous chapter. The plan to shift from a disciplinary orientation to one that is interdisciplinary is built around short-, medium- and longer-term goals. Table 6 delineates these goals with specific reference to each of Schein’s (2017) three stages of change. To ensure a realistic Organizational Improvement Plan, limitations are acknowledged, which include the high rate of staff turnover and the disruption to momentum for change; the realities of the academic cycle and the limited windows for planning new initiatives; the tricampus nature of College X and the need for bringing people together from geographically disperse campuses; the limited understanding of unique considerations of introducing interdisciplinarity in colleges as compared to universities.

Similarly, the change process monitoring and evaluation plan follows Schein’s (2017) three stages of change and the goals described in Table 6. Of particular importance is the concept of psychological safety and the eight activities for creating psychological safety (Schein, 2017) provide a list of what needs to be monitored and evaluated as part of this OIP. Most specifically, these activities are applied to the Community of Transformation process. Finally, the communication plan speaks to the customized messages required by different stakeholders and draws on sensemaking tools (Kezar, 2018) – a strategy to help people question assumptions and create the space for them to be more receptive to new ideas.
Conclusion

Dedicating all this time and these resources to shifting peoples’ perceptions in light of the cultural context at College X may seem surprising to some. However, Buller (2015) admonishes that “this investment in socializing new members to the culture and encouraging them to adopt new techniques in their teaching and research pays off in a faculty that’s less resistant to change and more creative, resilient, and innovative in its problem solving” (Buller, 2015, p. 162). The ability to engage in interdisciplinary conversations will become increasingly important for students upon entering the workforce due to increasingly complex problems. The requirements of employers for graduates with key essential future skills like problem-solving, collaboration, communication, creativity, and critical thinking – which are considered resilient to future disruptions – is a key consideration that College X must grapple with to meet the priorities set out in its Strategic Plan.

However, introducing interdisciplinarity to the curriculum must foundationally take into consideration that this change initiative will involve disturbing deeply rooted disciplinary boundaries and, in turn, challenge the disciplinary identities of faculty. Therefore, faculty members are a major focus of this OIP. The introduction of interdisciplinary approaches will require building relationships with and amongst faculty and creating multiple opportunities for psychologically safe exploration and conversations. It will also involve relationship-building across the organization with other academic administrators to leverage opportunities within the organization where interdisciplinary conversations are organically happening, or have the potential to happen (for example, the Teaching and Learning Centre, Applied Research Department, and Innovation Centre). From the outset, in order to gain the commitment of the senior executive team, the change agent must be able to successfully demonstrate that
interdisciplinarity aligns with the College X mission, values, and strategic priorities. Namely, that interdisciplinarity is an innovative, evidence-based means of preparing career-ready graduates.

Cultural theory helps decipher the starting point for supporting changes to perceptions, values, and beliefs as evidenced by introductory references in this OIP. That includes the underpinnings of both the culture of College X and the subcultures within various disciplines. Cultural theory provides the overall theoretical lens for this OIP by matching strategies and approaches to the observed culture. From a leadership perspective, adaptive leadership (Heifetz & Laurie, 1997) provides tools to help the change agent support faculty to challenge their underlying beliefs and attend to matters of psychological safety – a key concept identified by Schein (2017). Furthermore, a distributed leadership (Gronn, 2002) approach honours the cultural reality at College X of being consultative and collaborative within a bureaucratic system. Finally, sensemaking tools (Kezar, 2018), help guide the communication process – again with an aim of supporting people to change by creating new meanings.

The desired end result is a psychologically safe environment in which people can engage in the new thinking required to move forward with designing and teaching interdisciplinary courses or projects. Psychological safety is essential to the success of this change initiative and the key ingredients for creating psychological safety are embedded in this OIP, particularly within the Community of Transformation experience. Achieving this requires a change agent who can model an interdisciplinary approach. Kezar (2018) notes “a strong correlation between a person’s effectiveness as a leader and that person’s way of processing mental complexities, such as different points of view, multiple frameworks, and competing objectives, as well as those who can appreciate their own values as well as those of others” (p. xvii). These are also all
components of successful interdisciplinary conversations and, therefore, an effective change leader must be someone who, within themselves, is interdisciplinary-oriented.
References


College X. (n.d.), *Innovation Centre website*.

College X. (2019), *Strategic plan*.

College X. (2019), *Strategic plan website*.

College X. (2019), *Video*.

College X. (n.d.), *Website*.


http://apps.who.int/iris/bitstream/10665/70185/1/WHO_HRH_HPN_10.3_eng.pdf?ua=1
Appendix 1: Community of Transformation Overview

As described in the body of the Organizational Improvement Plan, the COT is a two-phased process. An overview of what will be covered in each phase is found below:

Community of Transformation – Phase 1

- Co-creation of group norms
- What is interdisciplinarity?
- What is the rationale for interdisciplinarity (from varying stakeholder perspectives)?
- Reviewing the proposed vision for interdisciplinarity at College X and creating a shared vision
- Challenges of interdisciplinarity - general
- Learning about each other’s disciplinary orientations
- Challenges of interdisciplinarity – specific to the composition of the COT participants

Community of Transformation – Phase 2

- Reiteration/refinement of group norms
- Exploration of different iterations and manifestations of interdisciplinarity: co-teaching, problem-based learning, interdisciplinary electives, multi-perspectival core courses and others (Lyall et al., 2015)
- Anticipating “pain points” (including, but not limited to):
  - The process of integrating different disciplinary approaches
  - Exploration of different disciplinary approaches to assessment
  - Exploration of philosophical differences between disciplines
  - Exploration of practical and logistical challenges
- Brainstorming potential interdisciplinary opportunities
• Developing interdisciplinary opportunities

• Presenting ideas to senior executive team and implementation launch.
Appendix 2: Interdisciplinary Teaching and Learning Readiness Checklist for Faculty

Faculty interested in putting their name forward to participate in the Community of Transformation experience should self-reflect on the following characteristics associated with successful interdisciplinary explorations:

- reliability;
- flexibility;
- patience;
- resilience;
- sensitivity to others;
- risk-taking;
- thick skin;
- preference for diversity and new social roles;
- open to diverse ways of thinking;
- able to admit they do not know; and
- comfortable with ambiguity. (Julie Thompson Klein as cited in Strober, 2011; Newell, 1994)