Employability Skill Development in Higher Education: Students' and Faculty Members' Perspectives

by

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Abstract

Employability is one's ability to obtain and maintain employment, and employability skills are the skills that support this goal, such as working with others and communication. Government, employers, and students expect higher education institutions to prepare graduates for the world of work. However, there is a limited research on students' perspectives about their employability development through their academic programs. This mixed methods study embedded employability skills in three academic courses in order to gain insight into both undergraduate students' and faculty members' perspectives on employability skill development in academic courses. Results demonstrate that employability is important to these students and that they expect it to be addressed in their academic programs. Students were aware of developing employability skills, but were less aware of the specific skills they possess and need to work on. The faculty members involved in the study addressed employability to differing degrees in their courses, yet each of them recognizes its importance to students. This study supports the development of employability initiatives in higher education and highlights that both students and faculty members can benefit from support in identifying and assessing the employability skills practiced in academic courses.

Preface

This thesis is an original work by Emily Gregory. The research project, of which this thesis is part, received approval from the University of Alberta Research Ethics Board, Project Name "Student Perceptions of Employability Skills in General Programs", No. Pro00075701, August 22, 2017.

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Table of Contents

Chapter 1: Introduction 1

Overview 1

Statement of the Problem 2

Purpose 7

Research Questions 8

Definitions 8

Unique Contributions 10

Study Significance 10

Position of the Researcher 11

Summary 12

Chapter 2: Review of the Literature 14

Overview 14

Employability: What is it and How it Relates to Higher Education 15

Employability Skills 17

Perspectives on Employability and Higher Education 18

Employer perspectives. 18

Faculty member perspectives. 20

Student perspectives. 23

Personal Qualities and Employability 26

Control beliefs. 26

Self-theory. 27

Self-esteem. 28

Self-efficacy 29

Self-Efficacy and Employability Models 33

Empirical research on self-efficacy and employability. 34

Current Higher Education Initiatives for Employability Development 34

Summary 37

Chapter 3: Methods 38

Overview 38

Methodology 38

Research Questions 40

Research Design 41
Sampling procedures. 42
Data collection. 44
Data analysis. 46
Credibility procedures. 48
Merging procedures. 50
Summary 50
Chapter 4: Results 51
Overview 51
Exploring perspectives on employability. 51
Participant details. 51
Interview 1 52
Definitions of employability. 53
Importance of employability. 54
Skills awareness. 55
Curriculum and teaching. 58
Career exploration for students. 60
Skills Inventories 61
Survey 65
Importance of employability. 74
Awareness of employability skills. 75
Self-efficacy 77
Employment expectations 78
Open-Ended Questions 79
Self-efficacy 79
The role of higher education in employability. 83
Skill enhancement 84
Real-world focus 84
Employer expectations. 85
Career education. 86
Interview 2 87
Definitions of employability. 87
Changes. 88
Skill awareness. 90
Responsibility. 91
Summary 92
Chapter 5: Discussion 95

Overview 95
Importance to faculty members. 96
Importance to students. 97
Merging faculty members' and students' perspectives. 97
Awareness of Employability 98
Employability Development 100
Responsibility for employability development. 102
Supporting faculty members. 102
Self-Efficacy 103
Skills Inventories 107
Practical Implications 108
Career Integrated Learning at the University of Alberta. 109
Limitations and Future Research 109
Sampling. 109
Self-efficacy: theoretical framework. 110
Encouraging reflection on employability skills. 111
Research methods. 112
Conclusion 112
References 114
Appendix A 119
Participant Information Letter and Consent Form 119
Appendix B 123
Interview Guide 1 123
Appendix C 125
In-Class Presentation Guide 125
Appendix D 126
Survey Informed Consent and Questions 126
Appendix E 133
Interview Guide 2 133

Tables

Table 4.1 ..... **62**
Employability Skills Identified for Participating Courses 62
Table 4.2 ..... **67**
Students Current Work Situation 67
Table 4.3 ..... **67**
Level of Agreement to Self-Efficacy and Employability Statements 68
Table 4.4 ..... **68**
Survey Descriptive Statistics 69
Table 4.5 ..... **69**
Test of Between Subject Effects: Gender 70
Table 4.6 ..... **70**
Test of Between Subject Effects: Student Status (Domestic or International) 70
Table 4.7 ..... **71**
Test of Between Subject Effects: Academic Standing (Dean's List) 71
Table 4.8 ..... **72**
Test of Between Subject Effects: Year of Study 72
Table 4.9 ..... **72**
Test of Between Subject Effects: Faculty 73
Table 4.10 ..... **73**
Test of Between Subject Effects: Work Situation 73

Chapter 1: Introduction

Overview

When I started my undergraduate degree in the fall of 2006, I did not know where it would take me and honestly was not certain what I would get out of it. Like many students, my parents pushed me towards postsecondary education; it was what they had done, and it had worked out well for them. So I applied to the University of Alberta, got in, picked courses, and went. I knew I would have to work hard, but I also worried about whether or not I would find a good job after my degree. During my degree, I was unaware of the skills, knowledge, and attributes I was developing. Because of this uncertainty, I decided I would have to complete a second degree, in a professional program, in order to have any hopes of having a successful career. Before starting this second degree, I applied for jobs and amazingly, or so it seemed at the time, someone hired me. A couple of jobs later, I ended up in Career Services at the University of Alberta where I help students learn about their career interests and gain hands-on experience. I have learned that my experience is not unique and other students are also unsure how their academic experience translates to the world of work.

"*What can I do with my degree?*" Anecdotally, staff in Career Services at postsecondary institutions are commonly asked this question by students. There is not a straightforward answer to this question, especially for students from non-professional programs where their degree does not lead to a professional designation. In my work with students, I often talk to them about the skills they develop through their co-curricular and extra-curricular activities and how these skills and experiences can help them in the world of work. Through this experience, I began to wonder why I seldom reframe these conversations with students to analyze what soft skills are developed

in their academic courses. This led me to consider what students think they are learning through their degrees that will enhance their employability.

This thesis explored undergraduate student perspectives about employability and employability skill development through curricular activities. I have divided my thesis into five chapters. In this introductory chapter, I explain the purpose and significance of this project. I introduce the project's research questions, key definitions, and delimitations. In the second chapter, I provide a critical analysis of the literature on this topic and further detail about the project's theoretical framework, self-efficacy (Bandura, 1997). The third chapter details the methodology and methods used to gain further insight into students' perspectives on employability. In the following chapter, I provide both the qualitative and quantitative results of the project. In the remaining chapter, I discuss the results of the project in comparison with the literature on the topic and implications for practice, review the project's limitations, and provide recommendations for future study.

Statement of the Problem

Higher education plays a significant role in the knowledge-based economy through the development of human capital; through their education, students develop knowledge, skills, and attributes that they will apply when they enter the workforce (Molla & Cuthbert, 2015; Knight & Yorke, 2002; Yorke, 2004). This perspective presents higher education as an investment for both students and governments, one that will ideally benefit the whole of society through a strong economy. In simpler terms, a university education is expected to lead to positive employment outcomes for students (Yorke, 2006). As Gedye and Beaumont (2015) explain, "massification [of higher education] has led to increased competition for graduate employment and a reduction in the currency of a degree" (p. 406). Securing paid employment postgraduation (no dash here,

they're not together modifying a third thing) is dependent on a variety of factors, including the labour market, economy, and one's employability (Gbadamosi, Evans, Richardson, & Ridolfo, 2015). Many governments have also questioned the relevancy and quality of higher education programs, especially as these programs are funded in part by the public (Molla & Cuthbert, 2015). This has led to an increased focus on employability in higher education.

Employability is an individual's ability to obtain and maintain employment. It is influenced by a variety of factors, such as interests, preferences, abilities, level of education, and socio-economic variables (Molla & Cuthbert, 2015; Pegg, Waldock, Hendy-Isaac, & Lawton, 2012; Yorke, 2006). Differing perspectives on employability can also incorporate aspects of identity, such as being satisfied and successful, or contributing to the community and economy. This leads to understanding employability as more than simply getting a job; nor should employability be conflated with employment (Artess, Hooley, & Mellors-Bourne, 2017; Yorke, 2006). Hence, graduates' employment rates are not an indicator of their employability; rather they are an indicator of the economic climate and socioeconomic factors influencing these graduates. Employability can also be understood as an individual attribute, which may vary between individuals and is dependent on multiple factors (Molla & Cuthbert, 2015; Pegg, et al., 2012; Yorke, 2006).

Although it is debated as to whether or not the employability agenda is welcome in higher education, governments, employers and students, nevertheless, expect that higher education institutions will be involved in preparing graduates for future work (Brown, 2015; Molla & Cuthbert, 2015; Star & Hammer, 2008; Tymon, 2013). Governments who fund higher education expect accountability and a return on investment (where a return on investment results in employed graduates who contribute to the economy) (Molla & Cuthbert, 2015; Tymon, 2013).

Employers manage their workforce with support from higher education through work experience programs and the recruitment of graduates. Moreover, there appears to be growing rhetoric from employers that many graduates do not possess the appropriate skills required for the workforce (Jackson, 2012; Molla & Cuthbert, 2015; Moore & Morton, 2017; Tymon, 2013). This skill mismatch, whether it is accurate or simply a perception, pushes higher education institutions to address employability. There are many reasons why students continue their education past secondary studies, yet in Canada the primary motivations are career related (Canadian University Survey Consortium, 2016). Data from the Canadian University Survey Consortium also reveals that students expect a university education will help them obtain a rewarding career. Future employment is a crucial priority for many university students, though they also recognize a degree may not guarantee an entry-level job (Tymon, 2013). Tymon suggests that graduates are aware they need to develop additional skills, beyond technical skills and academic knowledge, for career success.

Co-curricular and extracurricular activities are proposed as a key method to increase students' employability, most notably through work experience programs (Artess, Holley, Mellors-Bourne, 2017; Mason, Williams & Cranmer, 2009; Pegg, et al., 2012). Work experience programs provide students with opportunities to enhance their skills in a real-world setting, learn about work settings, and network with potential employers (Mason, et al., 2009; Pedagogy for Employability, 2006). However, not all academic programs offer work experience opportunities to their students. Or, if programs exist students may not be able to access them for a variety of socioeconomic factors. The prominence of unpaid internships also raises questions about the exploitation of students (Osborne & Grant-Smith, 2017). The problem with pushing employability outside of the classroom is that it assumes all students will have equal access and

opportunity to participate. Consequently, the integration of employability initiatives has also been proposed in higher education curricula.

They are ways to embed employability in curricula that will not undermine subject learning (Brown, 2015; Pedagogy for Employability, 2006; Yorke, 2004). Knight and Yorke (2002), for example, argue that employability can be integrated into any academic subjects without compromising academic content or freedom. Employability and subject learning do not need to be oppositional (Pedagogy for Employability, 2006). Embedding employability into the curricula can be as simple as helping students recognize what skills they are learning and how these skills are important outside of academia (Brown, 2015; Pegg, et al., 2012; Knight & Yorke, 2002). Students are likely already developing many skills in their academic courses that will help them in future employment. Skills, such as communication, problem solving, and working with others, are enhanced through in-class presentations, discussions, assignments, and lab work. Rather than adjusting curricula, faculty members can help students to recognize the skills they are developing and help increase their self-efficacy regarding these skills (Artess, Hooley, & Mellors-Bourne, 2017; Brown, 2015). Although there is a significant amount of research about embedding employability in course curricula, as well as resources to support faculty, there is a gap in how willing and able faculty members are to take this on. Top-down approaches also risk ignoring diversity between disciplines and subverting faculty members' academic autonomy (Knight & Yorke, 2002). These issues raise concerns about how to engage faculty members in incorporating employability into their courses.

There is a great deal of literature about employability in higher education. This research addresses what role, if any, employability should have in higher education and how to address employability (Brown, 2015; Knight & Yorke, 2002; Molla & Cuthbert, 2015; Pegg, et al., 2012;

Teichler, 2015; Yorke, 2004). The perspectives of government, faculty, employers, and graduates are the focus of most research on the issue (Tymon, 2013). We know little about students' perspectives on employability, including the extent to which it even matters to them and their ability to articulate these skills (Tomasson Goodwin, Goh, Verkoeyen, & Lithgow, 2019; Tymon). Students are primary stakeholders within higher education; if we do not understand their perspectives on employability, our initiatives risk missing the mark. Furthermore, for students to effectively learn about and enhance their employability, they need to be engaged in the process (Tymon). Employability development is not something we can simply do for students; they must also be involved. Specifically, it is something we should be doing *with* them, rather than *for* them. Consequently, "the missing perspective" of current students' need to be addressed in the employability skills agenda (Tymon, p. 849).

The limited research about student perspectives on employability has focused on students in business programs (Jackson, 2012; Tymon, 2013). Tymon and Jackson explain that business programs are often more vocationally oriented than other university programs; as such, the students in these programs may also be more concerned with their post-graduation outcomes. Little research on employability has addressed programs outside of business, or areas of study that are less vocationally oriented. Tymon and Jackson note further that most research on employability has also been conducted in the United Kingdom and Australia. However, Canadian higher education systems have not been immune to neoliberal and economic pressure to address skill development (Bridgestock, 2009; Jackson). There are government pressures in Canada for publicly-funded universities to demonstrate graduate outcomes and to produce work-ready graduates (Bridgestock). We cannot assume that data from business students can be generalized to non-business students, or to the wider Canadian higher education system.

As mentioned, employability involves personal attributes and characteristics. Models of employability typically include concepts of self, with perhaps self-efficacy being most prominent (Dacre Pool & Sewell, 2007; Knight & Yorke, 2002; Turner, 2014). Self-efficacy is the "beliefs in one's capabilities to organize and execute the course of action required to produce given attainments" (Bandura, 1997, p. 3). Self-efficacy theorizes, in part, why individuals with the same skills will perform differently from one another, and why an individual will perform differently under varied circumstances (Bandura). Self-efficacy also affects career interests as it influences what careers we will consider attainable (Bandura). However, efficacy beliefs do not reflect actual ability; rather, they are personal beliefs about one's ability. Acknowledging that self-efficacy theory is not linked to actual career ability, it can still be applied to employability. Both self-efficacy and employability are individual constructs that will vary between individuals. Several models of employability also suggest efficacy beliefs play a mediating role between knowledge, skills, attributes and employability (Dacre Pool & Sewell, 2007; Knight & Yorke, 2002). There is arguably a strong relationship between employability and self-efficacy, but this relationship is not well understood.

Purpose

Building on a prior research design developed by Memorial University in Newfoundland, the overarching purpose of this mixed method study was to expand our understanding of the relationship between employability and self-efficacy from the perspectives of faculty members and students.

The research design for this project was modelled off the Career Integrated Learning project from Memorial University of Newfoundland. While this project is unpublished, I was in contact with its researchers who openly shared their experiences and methods. For this mixed

methods project, I developed the following four research questions: two quantitative research questions, a qualitative research question, and a mixed methods research question that addresses how the datasets were merged.

Research Questions

Quantitative:

- *(RQ1)* What are undergraduate students', in non-professional faculties, perspectives on employability skill development in their course work?
- *(RQ2)* What perceived influence (if any) does the identification of employability skills in course curricula have on undergraduate students' self-efficacy?

Qualitative:

- *(RQ3)* What are faculty members' perspectives on employability skill development within their undergraduate courses?

Mixed:

- *(RQ4)* Using the results from RQ1, 2 and 3, in what ways are students' and faculty members' perspectives about employability skill development in alignment with one another?

Definitions

Employability can be understood in multiple ways. Some definitions are rather narrow, focusing on skills and securing employment (Bridgstock, 2009). Other definitions include personal attributes, beliefs, and address the ability to maintain and be successful in work (Yorke, 2006). This study focused on the personal qualities within employability, notably self-efficacy – though further research should also explore self-esteem and confidence. These qualities underpin that employability is a personal trait that will vary between individuals. It is also important to

note that employability is not just about employment. For this project, I referred to Yorke's (2006) definition of employability:

> Employability is taken as a set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy (p. 8).

Employability skills are the skills directly related to obtaining and maintaining work (Bridgestock, 2009; Kwok, 2003). The Conference Board of Canada (n.d.) developed a list of employability skills that can be applied in work, but also a range of daily activities. The Conference Board of Canada divides employability skills into three categories: fundamental skills, personal management skills, and teamwork skills.

Self-efficacy is defined as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). Self-efficacy stems from Bandura's Social Cognitive Theory and highlights that skills are not the sole indicators of ability. Rather, our beliefs about our abilities to execute a task or achieve a goal will influence our performance.

Higher education is defined as the post-secondary education systems that lead to an academic degree.

Faculty members are defined as academics teaching and conducting research in higher education.

Undergraduate students are students working towards the completion of a bachelor's degree and who have completed secondary education.

Nonprofessional faculties are defined as programs of study where the degree does not lead to a professional accreditation or where the degrees do not lead to a specific career or professional designation.

Unique Contributions

Higher education institutions have become increasingly involved in the employability development of their students (Brown, 2015; Molla & Cuthbert, 2015; Pedagogy for Employability, 2006; Yorke, 2004; Yorke 2006). As the next chapter illustrates, a review of the literature suggests three clear gaps: student perspectives on employability, the relationship between employability and self-efficacy, and faculty member engagement with their students' employability development. This mixed methods project aimed to gain further insight into these gaps. As a theoretical framework, I drew from self-efficacy theory (Bandura, 1997), which looks at our beliefs about our abilities. This project involved both faculty members and the undergraduate students in their courses. The findings of this study shed light on their perspectives of employability, as well as how their perspectives are aligned.

Study Significance

Kwok (2003) asserts that students are not always able to express the employability skills they may be learning in the classroom. The results of this applied study addressed a gap in how students in non-professional programs understand their employability skill development, as well as how to engage faculty members in their students' employability development. By better understanding students' perspectives on employability skills, the academic community and career services will be better able to design and implement programs targeted at developing these skills. The project also examined the relationship between self-efficacy and employability. Further, if students are aware of their employability skills, they may be better able to express

these skills to future employers. The overarching aim of this study was to help develop a better understanding of students' and faculty members' perspectives on employability. The findings of this study are useful in designing employability initiatives in higher education.

It is important to highlight what fell outside the scope of this project. I identified several key delimitations for this project. This project did not aim to assess students' employability skills or self-efficacy. Rather, the project focused on asking students about their perspectives on their employability skills. The examination of a possible relationship between employability and self-efficacy was also exploratory; this project did not address causation.

I also did not intend to generalize the results of this project beyond the study group. The results are purely exploratory and meant to develop a localized perspective on employability. As such, I do not make claims about best practices in enhancing employability. These practices are likely best tailored to the unique context of each higher education institution and its students.

Position of the Researcher

I have worked in higher education student affairs for over nine years. Currently, and over the course of this research project, I worked in Career Services at a research-intensive university. My work focuses on supporting students to gain experience outside of the classroom and explore their career options, and this includes coordinating funding programs for professional development and work experience programs. I have adopted a pragmatist worldview in my student affairs work, which is common at the institution where I work. We are typically problem-focused, and look for ways to support students through their academic journeys and careers. In my work, I try to remind myself that students are not a monolith. They bring with them different perspectives, experiences, needs, and expectations. Student affairs work also focuses on practical, real-world applications, which means I need to balance what works well for students

with the practical realities of public service work (i.e., limited time and funding). This pragmatist worldview permeated my research project and guided me through its design, implementation, and analysis. I had support from the Career Services department throughout the project. I considered my project as a pilot for future opportunities to collaborate with faculty members to support students' employability skill development.

I also recognize there are many criticisms of focusing attention in higher education on employability, as vocational pursuits are not necessarily the primary purpose of a university education. These criticisms create "an artificial dichotomy between this traditional 'higher' academic purpose, and the employability requirements" (Star & Hammer, 2008, p. 237). But for many students, the primary purpose of attending university is preparation for a career and getting a good job, and I do not feel we can ignore this (Canadian University Survey Consortium, 2016). Addressing employability in higher education does not need to replace traditional academic purposes, I believe the two can function together. I intend for this project to ultimately serve as an opportunity to enhance employability supports for students.

Summary

In this chapter, I have introduced the topic of employability in higher education and the current research gaps in this area. I outlined who expects higher education to help prepare students for the world of work. In the knowledge-based economy, a degree is no longer a guarantee of a job. As such, employability, which is the ability to obtain and maintain employment, has become increasingly important in higher education. Higher education institutions have explored many methods to address employability, notably work-experience programs. Curricular initiatives, which involve faculty members, aim to help students identify and translate their skills beyond academia. Throughout the employability research, students'

perspectives have largely been limited and missing. Informed by self-efficacy theory, my thesis addressed this gap in knowledge by using a mixed methods approach to gain further insight to both students' and faculty members' perspectives about employability. I proposed that this research will help faculty members and career services to better support students in their employability development. I closed this chapter with key definitions, and delimitations of the project.

In the next chapter, I will review relevant literature to employability in higher education. The chapter includes an analysis of employability, considers employability from multiple perspectives, addresses the relationship between employability and self-efficacy, and briefly discusses higher education initiatives to address employability.

Chapter 2: Review of the Literature

Overview

The previous chapter introduced my personal connection to, and rationale for, a mixed methods study to gain further insights into students' and faculty members' perspectives on employability skill development through curricular activities. This project aimed to help both the academic community and career services to provide better student supports regarding employability initiatives in higher education.

Universities have become increasingly responsible for preparing students for their future employability in the knowledge-based economy (Su, 2014; Kwok, 2003). As the focus of higher education takes on job-preparedness, universities are increasingly concerned with student outcomes, such as post-graduation employment, and the quality of undergraduate education (Moore & Morton, 2017). A significant amount of research has been conducted about the outcomes of higher education and employability skills (Hughes & Barrie, 2010; Mason et al., 2009; Yorke, 2004). Yet, this research was conducted for students, rather than with them (Hughes & Barrie, 2010). Students' experiences and perspectives have been largely overlooked in the discourse about employability skills and higher education (Tymon, 2013).

In this chapter, I describe and analyze the literature and theory pertaining to employability development in higher education. This examination reviews: 1) what is meant by employability and employability skills, 2) various stakeholder perspectives on employability and higher education, 3) self-theories in relation to employability, and 4) a brief overview of how higher education is addressing employability.

Employability: What is it and How it Relates to Higher Education

Employability is tied to, and heavily influenced by, human capital theory and the knowledge-based economy. Human capital theory suggests that the economic success of a region or country is dependent on the education of its workforce (Knight & Yorke, 2002). Consequently, government and economic stakeholders have become increasingly involved in higher education to ensure the development of human capital through an educated workforce (Yorke, 2004). Human capital theory supports the move towards knowledge-based economies, which are "characterized by a high level of technological advance, rising productivity and efficiency and prevalence of knowledge-based services" (Molla & Cuthbert, 2015, p. 241). As the economies in developed countries, including Canada, focus more attention on knowledge-based services, rather than goods-based production, there is a growing need for a highly skilled and adaptable workforce. In an economy that requires innovation, flexibility, high levels of education and lifelong learning, education is viewed as an economic resource (Bridgstock, 2009; Molla & Cuthbert, 2015).

Higher education institutions in developed countries are under pressure to address employability by ensuring their graduates are skilled and can easily transition into the workforce post-graduation. In many countries, notably the United Kingdom and Australia, post-secondary funding has become contingent upon demonstrable graduate outcomes and employment levels of graduates (Bridgstock, 2009, Yorke, 2006). Higher education providers are also under pressure from employers to "ensure graduates emerge from higher education ready for the labour market" (Artess, et al., 2017, p. 6). At a basic level, employability can be viewed as graduates' readiness to enter the labour market. However, the concept of employability is far more complex and multi-variant than securing work.

Although there is over twenty years of research on employability, there is not a standard, agreed upon definition of the term. Employability can be viewed narrowly, for example as the ability to secure and maintain employment (Fenesi & Sana, 2015). Broader definitions, such as the following suggested by Dacre Pool and Sewell (2007), incorporate skills and identity: "Employability is having a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful" (p. 280). Yorke's (2006) definition of employability is commonly used as it addresses individual and societal aspects of employability: "Employability is taken as a set of achievements – skills, understandings and personal attributes – that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy" (p. 8).

Neither definition suggests employability is developed solely through a program of studies in higher education. An individual's employability will be shaped by their experiences in higher education and by other factors such as work experience, confidence, and socio-economic status. Yorke (2006) also distinguishes between the ability to secure a job and employability, which accounts for external factors that contribute to employment levels. For example, a graduate of a Fine Arts program may be unable to find employment in their field. This could be based on a variety of factors, such as labour market conditions, location, and social capital. However, the graduate's current state of employment is not a measure of their employability. It is a multi-faceted characteristic of an individual that can be developed (Yorke, 2006).

Employability is not only about getting a job; rather, it is also the capacity to function in a job. Consequently, employability and employment are not one in the same. Jolland (2015) clarifies that "falling employment outcomes in the current economic climate should not be

interpreted as falling levels of graduate skills and attributes" (p. 2). The conflation with employment is an area of risk for the employability agenda. Researchers, policy developers, and employers can easily use employment rates as a measure of employability and program outcomes (Fenesi & Sana, 2015). However, unlike employment, which can be measured, employability is an individual attribute, which will vary between individuals and is dependent on multiple factors.

Employability Skills

As discussed, employability is a complex and multi-variant topic. For this project, I focused on skills developed through higher education that influence employability. Employability skills are the skills directly related to obtaining and maintaining work; they include the generic skills employers expect of graduates (Bridgstock, 2009; Kwok, 2003). Bridgstock suggests a taxonomy of employability skills, which consists of self-management skills, career building skills, discipline-specific skills, and generic skills. Generic skills, such as communication and problem-solving skills, are generally understood to be transferable between different contexts.

There are multiple employability frameworks that include lists of skills and attributes students should possess and be able to demonstrate upon completion of their studies. These frameworks differ between discipline, as well as institution and study, which creates challenges for researchers who seek to compare employability studies. Addressing this issue, Tymon (2013) compared six employability frameworks and found each had the following in common: communication, teamwork, and interpersonal skills. However, these frameworks do not necessarily share an understanding of what these skills mean (Tymon). Skills may not be understood in the same way by multiple stakeholders. Communication skills, for example, are a

broad category that includes written and oral communication. These skills will also vary between discipline and industry; as such there is not necessarily a standard level of communication skills that can be imposed on higher education.

Regardless of the nuances, employability skills can be demonstrated, observed, and assessed. However, the attributes of employability are less tangible, such as critical thinking, scholarship and confidence. It is more difficult to assess attributes as they cannot always be demonstrated and observed. Therefore it is easier to address employability skill development in a more straightforward way than attributes in higher education institutions.

Perspectives on Employability and Higher Education

There are multiple stakeholders involved in the employability agenda, including employers, policymakers, graduates, higher education institutions, and students. Each group has a different perspective on the topic and research projects about employability tend to focus on one of the stakeholder audiences. Many researchers address how employability fits into higher education, suggesting it threatens the traditional purpose of higher education. As such, it is valuable to explore the concept from these stakeholders' perspectives. In this section of the literature review, I look at employer, faculty member, and student perspectives on employability.

Employer perspectives.

There is often a perceived mismatch between graduates' skill levels and employers' needs, with graduates' skills falling short of employer expectations. Many studies cite that graduates' skill levels are well below industry standards (Moore & Morton, 2017). Employers argue graduates are not prepared for the world of work and do not have the correct abilities. This perceived mismatch has led to calls from industry bodies for curriculum reform in higher education. For example, the Australian Chamber of Commerce and Industry has recommended

"further investigation of course design processes' in HE (higher education) and more formal structures to ensure students developed industry-recommended skills" (Moore & Morton, p. 593). The employability agenda provides employers and industry bodies with potential influence in higher education. Their involvement can be beneficial in higher education, as seen through work-integrated learning partnerships (i.e., work-experience, internships, practicums). Yet, employer involvement has also been criticized as placing narrow, instrumental pressures on higher education. This relates to the purpose of higher education, which is discussed later in this chapter.

Perhaps employer reports of unprepared graduates should be viewed with a bit of skepticism. Many skills are best learned on the job, which is one reason why higher education institutions facilitate work-experience programs. Work-experience programs are commonly cited as the best way to help students develop their employability (Mason, Williams, & Cranmer, 2009; Yorke, 2004). Furthermore, the data feeding the skills mismatch debate is based on employer perceptions, which may be biased, limited, or generalized. Moore and Morton (2017) interviewed supervisors of recent graduates about the latter's written communication skills, and their findings did not support the current conversation about unprepared graduates. Those interviewed recognized the differences in writing contexts and "did not expect graduates to arrive in their organizations equipped with all the necessary communication skills to perform" (Moore & Morton, p. 600). Those interviewed were also skeptical about the ability for post-secondary institutions to be able to prepare students for the communication demands of diverse organizations, suggesting instead the focus should be on helping students learn to transfer and adapt their skills and knowledge (Moore & Morton). Teichler (2015) and Jackson (2012) also argue employers do not always know what they want or need. Jackson (2012) explains:

"Inconsistencies between employer wish lists and their recruitment processes endanger the value in providing employability skills and the importance of undergraduates accurately evaluating their capabilities against skills criteria "(p. 354).

Although employers and industry bodies may call for greater employability skill development through higher education, a great deal of learning continues to take place on the job. As highlighted by Moore and Morton (2017), workplaces and industries are specialized, which creates challenges in preparing students for all the potential professional requirements they may be exposed to upon graduation. In addition, mastery of skills will not guarantee improved workplace performance; skills are not the only factor in employability (Jackson, 2012). An individual's performance in the workplace will be influenced by their previous work experience, confidence levels, and socio-economic factors. The employer rhetoric indicates a shift in responsibly for job preparedness from employers to students and higher education institutions (Kwok, 2003; Teichler, 2015). Employers need to expect to do some work onboarding and training recent graduates (Moore & Morton; Yorke, 2006). Higher education institutions, arguably, must advocate to employers and industry bodies about the latter's role in students and graduates' employability development.

Faculty member perspectives.

As faculty members are directly involved in the development and delivery of higher education curricula, it is imperative to examine their perspectives about employability. Employability development in higher education is a divisive issue for many faculty members, with some supporting the agenda and others asserting it goes against the traditional enlightenment purpose of higher education (Brown, 2015; Star & Hammer, 2008; Teichler, 2015). Many faculty believe employability is outside of higher education's mandate as their role

is to teach content not skills, suggesting the latter should be left to learning support or other student services (Brown, 2015; Star & Hammer, 2008). Additionally, the employability agenda gives government and employers a stronger voice in curriculum discussions and some faculty members perceive this as a threat to their academic freedom (Tymon, 2013). As Brown (2015) explains "it becomes easy for some faculty to regard any reference to "skills translation" or "career readiness" as a euphemism for feeding kids into a name-less corporate chipper" (p. 50). A focus on employability, some argue, also highlights higher education's capitulation to neoliberalism, where students become consumers of education and education itself becomes a product (Osborne & Grant-Smith, 2017).

Addressing employability is part of a larger, yet unresolved debate about the purpose of higher education in society and how to develop educated persons who are both employable and good citizens (Star & Hammer, 2008). Teichler (2015) suggests higher education in developed countries serves four main functions: intellectual advancement, cultural enhancement, preparation for the world of work, and critical thinking. The discourse surrounding the purpose of higher education, and which function should be the primary focus, has been shifting over the past five decades (Teichler, 2015). Star and Hammer (2008) argue the debate between the traditional academic purposes of higher education and employability requirements are a false dichotomy; they do not need to be mutually exclusive. The dichotomy, which devalues skills-based education, possibly results from the division between universities and vocational schools (Star & Hammer, 2008). Skill development is seen as the purpose of vocational education, and not traditionally within the purview of universities. However, preparing university graduates for their future employment does not fail society. "The development of appropriately skilled employees and self-reflective practitioners arguably sits on a continuum with the formation of

good citizens" (Star & Hammer, 2008, p. 243). Conversely, employability plays an important role in higher education, but it is not its sole purpose. As Osborne and Grant-Smith (2017) explain "the world needs capable and competent workers who possess the skills required to undertake their jobs, but that's not all we need" (p. 63).

Incorporating employability in higher education is contradictory to the traditional purpose of liberal arts education and it suggests higher education has adopted neoliberal philosophies. Faculty members' understanding of the purpose of higher education and the role of employability within it is complex and possibly strife with emotions. Although employability does not need to be seen as an attack against higher education's traditional values, it may feel this way to some faculty (Brown, 2015). Further, employability is a challenge to reconsider curricular practices, and some faculty members will be more open to address this in their teaching (Teichler, 2015). Others will likely be more apprehensive and skeptical of introducing the employability agenda into their classroom. It is these faculty members who will need to be provided with support, encouragement, and research data supporting employability development.

Employability, arguably, can be incorporated into existing curriculum without compromising content or academic freedom (Knight & Yorke, 2002). Brown (2015) suggests that faculty members "can help students recognize the importance of soft skills developed inside and outside the classroom long before their senior year or first job interview" (p. 51). Faculty can do this through discussions and dialogue with students about the skills they are developing. She argues that the skills students develop through curricular activities contribute to their employability. She also encourages faculty to consider ways to engage with employability that will not compromise their "disciplinary objectives and values of public higher education" (Brown, p. 54). "One solution is for faculty to include career exploration, professional writing,

analysis of representations of work, or interview assignments in existing courses" (Brown, p. 54). In a review of employability literature, Artess et al., (2017) identified embedding employability in the curriculum as a common practice. Although some faculty recognize the value of embedding employability in their curricula, we do not know how willing or able faculty members, who are not involved in employability research, are to take this on. Artess et al. also caution that further systematic research about employability practices is needed to better understand what works. It is also likely that many faculty will be opposed to employability in principle. Osborne and Grant-Smith (2017) argue faculty must resist neoliberal institutionalization, which involves resisting employability initiatives. Higher education institutions can develop and mandate employability initiatives, but without faculty members' engagement and buy-in they will likely be unsuccessful.

Student perspectives.

In Canada, students' primary motivations for attending university are career related (Canadian University Survey Consortium, 2016). In the Canadian University Survey Consortium's (CUSC) 2016 survey of first year students, 44% ranked preparing for a specific job or career as their primary reason for attending university. In the CUSC 2015 graduating student survey, students were asked to rank the most important skill areas where they expect their university to contribute. The top three areas were: thinking logically and analytically, skills and knowledge for employment, and time management skills. The CUSC survey results highlight the importance students place on employment throughout their degree. As students expect to enhance their employment outcomes through higher education, Artess et al. (2017) argue higher education has a moral responsibility to address employability. Students invest time and money in

their education, and although employability should not be the sole focus, they should be able to expect reasonably positive outcomes from their efforts, such as employability.

Until recently, most employability research has focused on employers and methods to address the topic in higher education – student perspectives have been largely missing from the debate. Addressing student perspectives on their employability development can help to understand the potential skills mismatch commonly cited by employers (Jackson, 2012). It is also unclear if, and to what extent, undergraduate students are engaged and motivated to participate in employability skill development. Learning theory tells us motivation and commitment are vital to learning, consequently a lack of undergraduate student engagement and awareness may hinder? their employability development (Tymon, 2013).

Three recent studies, two in the United Kingdom and the other in Australia, looked at undergraduate students' perspectives on employability skills. Jackson (2012) surveyed students about their self-reported skill levels. Overall the students found themselves to be reasonably capable, although scores were lower in critical thinking and, ironically, self-awareness (Jackson). Compared to employer perceptions, the students may be over-confident or may not understand employers' expectations (Jackson). Tymon (2013) asked undergraduate students about their understanding of employability and how much it matters to them. Students' understanding of employability focused on getting a job, and this included the importance of work experience and skill development (Tymon). This understanding of employability is narrower than many definitions presented in the literature, which highlights that students may not be on the same page as employers and researchers (Tymon). Gedye and Beaumont's (2017) study also asked students about their understanding and perception of the term employability. They also found that students' understanding of employability focused on getting a job, but higher year students

expressed a more sophisticated understanding, recognizing their personal control over their own employability (Gedye & Beaumont). Gedye and Beaumont classify the students' definitions as "more uni-dimensional compared to the multi-dimensional definitions" found in the employability literature (p. 416). The students "quite naturally, are more concerned with the context that is about themselves directly and which they may have more control over" – that is, finding a job when they graduate (Gedye & Beaumont, p. 416). Jackson and Tymon both recommend that students are told explicitly which skills employers look for and that critical self-reflection about skill development be encouraged in higher education. The results suggest students need to be more involved in the employability agenda, as opposed to being passive recipients of employability development.

The three studies are limited by how employability skills are understood (Gedye & Beaumont, 2017; Jackson, 2012; Tymon, 2013). As previously mentioned, there is not an agreed upon definition of employability or skills. Consequently, student perceptions of what constitutes communication or problem solving, for example, may be very different than employers' expectations. Furthermore, Jackson and Tymon's studies focused on business undergraduate students, who may be more concerned with employability as they have selected a vocationally oriented discipline. Tymon (2013) cautions that extrapolation beyond business students likely is not possible as academic disciplines and industry standards vary. Additional research about undergraduate student perspectives of employability, and from students outside of professional programs, is therefore needed to help better understand the topic. This research can provide insight into how to engage students in employability development.

Personal Qualities and Employability

"Personal qualities pervade employability" (Yorke & Knight, 2007). As previously mentioned, employability is not solely about securing employment, rather it entails the skills and attributes required to secure and maintain employment. Consequently, as Yorke and Knight (2007) argue, personal qualities are of significant importance to employability and need to be included in employability research and initiatives. Researchers have connected multiple personal qualities to employability, most notably control beliefs, self-theories, self-esteem, and self-efficacy (Bandura, 1997; Dacre Pool & Sewell, 2007; Reddan, 2015; Turner, 2014; Yorke & Knight, 2007).

Control beliefs.

Control beliefs are individuals' perceptions of how much they can influence and predict daily life events (Cassidy, 2012). Locus of control refers to outcomes expectancies, which are viewed as being internally or externally controlled (Cassidy, 2012). Individuals with an internal locus of control will view events as controllable through their own actions. Whereas, those with an external locus of control will perceive events as uncontrollable irrespective of their actions. For example, a student with an internal locus of control may believe their actions will determine if they succeed academically. Conversely, a student with an external locus of control may believe that factors outside of their control will have a greater influence on their academic outcomes. Cassidy (2012) explains that although locus of control has been tied to academic ability, the results are inconsistent. An internal locus of control may be connected to higher academic ability, yet it is not possible to unequivocally confirm this assertion (Cassidy). Furthermore, research has not yet examined the relationship between control beliefs and employability.

Control beliefs are also influenced by self-efficacy, which are personal judgements regarding ones' capabilities (Cassidy, 2012). Self-efficacy will be discussed in greater detail later in this section.

Self-theory.

Self-theories are people's beliefs about themselves, which create "different psychological worlds, leading them to think, feel and act differently in identical situations" (Dweck, 1999, p. xi). Self-theories are connected to individuals' beliefs about the extent to which attributes are changeable (Dweck). In particular, these personal theories have been tied to beliefs about intelligence and whether or not it is a stable or changing trait. Within self-theories, Dweck discusses theories of fixed and malleable intelligence to help explain ability, success, and confidence. Fixed theory views intelligence as a concrete entity that cannot change. Those with a fixed perspective focus on easy successes; challenges, setbacks, or higher performing peers may lead them to question their own intelligence (Dweck). Consequently, these individuals may avoid valuable learning opportunities if there is a risk of failure (Dweck). Conversely, individuals who view intelligence as malleable believe they can improve their intelligence through effort (Dweck). They will be more likely to take on challenges, which are perceived as opportunities to learn and experience new things (Dweck). These individuals will feel smarter based on their efforts (Dweck).

As self-theories play an influential role in students' development and achievement, they have been applied to higher education research. Gbadamosi et al. (2015) explored the relationship between self-theories and part-time work among university students. The researchers hypothesized that "students' fixed self-theories will be negatively related to their part-time work and career aspiration" (Gbadamosi et al., p. 1090). In other words, if one does not believe

intelligence can be changed, they will be less likely to work part-time and hold strong career aspirations. The results of this quantitative study did not support their hypothesis; however, the researchers did find evidence to support the predictive direction of the relationship. "The stronger a student believes that things are fixed and people have little chance of making a difference, the less likely they are to engage with part-time work and the more likely they are to have lower career aspiration drive" (Gbadamosi et al., p. 1095). The researchers also found that students with malleable views were more likely to take advantage of opportunities through part-time work (Gbadamosi et al.). This may imply that these students recognize the value of part-time work to improve their employability skills (Gbadamosi et al.). The findings of this study highlight the importance of part-time work for employability development and provide some insights into students' perspectives on employability. Self-theories may contribute to employability, however we do not yet know enough about this relationship to state any concrete conclusions.

Self-esteem.

Self-esteem, which is related to the previously mentioned personal qualities, may also contribute to employability. Dweck (1999) describes self-esteem as a "positive way of experiencing yourself when you are fully engaged and are using your abilities to the utmost in the pursuit of something you value" (p. 4). She goes onto argue it is not a stable quality, but one that will be reinforced by successes and challenged by failures (Dweck). It is, therefore, a quality that needs to be developed, where challenges and learning can be viewed as an opportunity, rather than a threat.

Dacre Pool and Sewell (2007) apply Owens' (1993) definition of self-esteem to employability. Self-esteem is characterized by self-respect, feelings of worthiness, and realistic

self-evaluations (Dacre Pool & Sewell). This realism encourages individuals to reflect on areas where they can grow and improve. Self-esteem, according to Dacre Pool and Sewell, is important to employability because students with high self-esteem will likely be more realistic about their achievements.

Turner (2014) presents an additional definition of self-esteem. Self-esteem is one's overall perception of oneself; although the term may also refer to one's belief in their ability (Turner). Research has found self-esteem to be a pre-requisite to academic success; however, as Turner points out, the meaning of the term is subjective and inconsistent. Consequently, general terms, such as self-esteem which do not have a standard definition, are likely less useful in higher education and employability research (Turner).

Self-efficacy.

Self-efficacy is an individual's belief in their ability to perform a task or achieve their goals (Turner, 2014). Bandura (1997) provides a commonly used definition of self-efficacy: "Perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). Self-efficacy involves organizing skills in order to apply them in multiple contexts (Bandura). People with the same skills will perform differently from each other, and the same person will likely perform differently under varied circumstances (Bandura). Bandura explains that "perceived self-efficacy is not a measure of the skills one has but a belief about what one can do under different sets of conditions with whatever skills one possesses" (p. 37). Self-efficacy also contributes to motivation as it influences which activities one may take on or shy away from. Similar to fixed versus malleable self-theories, different levels of self-efficacy will determine how an individual perceives challenges and failures. For those with high self-efficacy, challenges are an opportunity to master a skill and

improve their capabilities. Whereas those with low self-efficacy perceive failure as an indicator of insufficient abilities (Bandura). It is important to note that self-efficacy is not a stable trait, so it will vary between contexts and circumstances (Bandura). For example, a student may perceive themselves to be highly capable of succeeding in their psychology course, but not capable of succeeding in their mathematics course. The student's perceived self-efficacy will shape their academic performance and career goals (Bandura). Low self-efficacy for certain contexts may lead to avoidance of these areas, whereas high self-efficacy may lead to seeking them out (Bandura; Reddan, 2015). Consequently, efficacy beliefs have behavioural consequences. Knight and Yorke (2002) explain that self-efficacy is an important mediating factor between ability, educational pursuits, and attainments. Self-efficacy, in part, is what helps individuals act and confront challenges.

Self-efficacy beliefs are learned through a variety of experiences and intentionally creating learning opportunities to mimic these experiences can help increase self-efficacy (Bandura, 1997; Reddan, 2015). Bandura outlined four areas where efficacy beliefs are learned: performance accomplishments, vicarious learning or modeling, verbal persuasion, and situations with low levels of anxiety related to the behavior. Performance accomplishments, also referred to as mastery experiences, serve as indicators of capability and are therefore influential for efficacy. Success contributes to self-efficacy. Failure undermines it, especially if efficacy is not already established (Bandura; Reddan). Vicarious learning, or modeling, provides the opportunity to see someone similar succeeding at a behavior or task. Verbal persuasion, such as encouragement or support, can enhance self-efficacy but it must be focused on realistic challenges. Reducing anxiety and stress can also contribute to self-efficacy. These four domains help us to understand the development of efficacy beliefs, and also provide means for modifying efficacy beliefs

through teaching interventions (Reddan). Turner (2014) provides examples of how the domains can be applied to higher education teaching to increase students' self-efficacy, such as providing early, frequent, and appropriate feedback. Relatively simple things, rather than large-scale employability initiatives in higher education, may have a significant impact on students' self-efficacy and possibly their employability.

Self-efficacy and employability are connected in several ways. Efficacy beliefs determine, in part, which career options people will consider, even when controlling for interest, ability, and achievement (Bandura, 1997). "It is not experience or skills per se but the beliefs of personal efficacy constructed from those experiences that shape academic performance and career choices" (Bandura, p. 424). Someone's perceived self-efficacy will be predictive of which occupational fields they pursue or avoid. At this point it is important to reinforce that perceived efficacy is not equivalent to actual ability; a student may not perceive themselves as being good at something, or cut out for a specific career, even if they do possess the necessary skills and abilities (Bandura). Reddan (2015) also argues almost everyone has areas where they lack confidence in their abilities, and in some this may limit their career options or success. Regardless of abilities, perceived efficacy will therefore influence career development and employability (Bandura). As self-efficacy plays a role in education and career pursuits, Turner (2014) argues that self-efficacy needs to be developed in higher education. However, higher education research often overlooks the influential role self-efficacy plays in employability (Knight & Yorke, 2002; Turner).

Yorke and Knight (2007) have created self-efficacy and employability questionnaires, which are intended to serve practical purposes in higher education teaching. The questionnaires are targeted towards undergraduate students and ask for level of agreement to a series of

statements. Although the questionnaires provide insight into students' perspectives on self-efficacy and employability, Yorke and Knight do not intend for them to be used to measure these constructs among university students. Employability and self-efficacy beliefs are highly contextual and multivariate, consequently Yorke and Knight shy away from using these instruments for summative assessment or to make generalizations about either construct. The purpose of the instruments is to prompt students to reflect on their efficacy beliefs and employability (Yorke & Knight). Data collected through the instruments are intended to be used at the local level to guide learning and employability initiatives (Yorke & Knight).

Awareness of one's capabilities is critical in employability development. If students are not aware of what skills they are developing, do not believe they possess these skills or do not feel they can improve these skills, self-efficacy theory suggests they may be less likely to achieve their goals. Yorke (2004) suggests individuals with a low sense of self-efficacy need explicit feedback, which highlights that we cannot assume all students recognize skill development. To some faculty members it may seem obvious which skills are being practiced in their courses, yet not all students may grasp that they are developing more than subject matter knowledge. Therefore, explicitly stating to students which skills are being practiced through a course, may help them increase their self-efficacy. However, there is little research on the effectiveness of the previous statement.

Examining employability through the lens of self-efficacy highlights the importance of individual attributes and qualities; it denotes employability as an individual construct that will not be the same for each student (Gbadamosi et al., 2015). Each student's experience in post-secondary education will look slightly different, with a different selection or sequencing of courses, different co-curricular experiences, different part-time work, and varied socio-cultural

factors. Self-efficacy moves employability away from simply being a labour market and policy issue, highlighting that it is also a personal, human issue. As previously mentioned, students' perspectives about employability have been largely overlooked in employability research. Furthermore, the relationship between employability and self-efficacy is not yet understood. These research gaps are an opportunity to gain further understanding into students' perspectives on employability, while using self-efficacy as a framework to understand their perspectives.

Self-Efficacy and Employability Models

Two models of employability incorporate self-efficacy as essential components in the development of employability. Knight and Yorke's (2002) USEM model is influenced by self-efficacy theory. USEM is an acronym for understanding, skills, efficacy beliefs, and metacognition (Knight & Yorke). The strength of the model, Knight and Yorke argue, is the focus on personal qualities and self-reflection. Focusing solely on knowledge and skill development is likely useless if students are not reflecting on their development, nor feel they can make improvements and achieve their goals. The CareerEDGE model, developed by Dacre Pool and Sewell (2007), builds on the USEM model. CareerEDGE, in addition to several components not included in USEM, also incorporates reflection, self-efficacy, self-confidence, and self-esteem (Dacre Pool & Sewell, 2007). The 'self' components in the model essentially act as mediating factors between knowledge, skills, and attributes and employability; positive self-efficacy is needed in order to succeed. The inclusion of self-efficacy in these two well-known models of employability highlight the importance of self-efficacy in employability.

Although it is valuable to consider personal qualities in relation to employability, the context surrounding employability cannot be overlooked. Turner (2014) cautions that focusing on individual traits risks setting students up to have either the 'right' set of characteristics, or

characteristics that need to be fixed. She argues current models of employability focus on the individual and are devoid of the contexts surrounding these individuals (Turner, 2014). Consequently, any deficits are viewed as the responsibility of the individual to remedy. Employability is a complex, multifaceted issue, as such employability models and initiatives cannot overlook socioeconomic and contextual factors that may influence students' post-graduation employment.

Empirical research on self-efficacy and employability.

The connection between employability and self-belief has not been well-researched. Self-efficacy theory has been generalized to employability development, yet there is a lack of empirical evidence to support these generalizations. In consideration that student perspectives of employability are also under-researched, exploring students' self-efficacy beliefs in relation to their employability skill development can contribute to the employability debate. As such, there is a clear need for further research on the relationship between employability and self-efficacy.

Current Higher Education Initiatives for Employability Development

Employability is currently being addressed in higher education in a variety of ways, most notably through work experience programs. Work experience programs are commonly cited as essential to students' employability; these experiences provide an opportunity to apply one's skills and knowledge in a workplace setting, learn about professional practices, and make professional connections prior to graduation (Pedagogy for Employability, 2006; Mason, et al., 2009). As work experience programs have a strong positive effect on students' labour market outcomes, it seems many employability skills may be best learned in the workplace, rather than in the classroom (Mason, et al., 2009). However, work experience programs are not always offered across all disciplines. Mason, et al. found provision of formal work experience

opportunities was higher in business programs than in history programs. This raises concerns about employability support between disciplines and access to employability initiatives across institutions. Liberal arts programs, including history, may be more focused on the traditional purposes of higher education, such as intellectual and cultural enhancement, than on vocational aspects.

As work experience is not offered to all undergraduate students, higher education institutions have looked at other ways to enhance employability development. Mason et al. (2009) suggest three higher education approaches to enhance employability development: modification of existing course content, introduction of new courses and teaching methods, and work experience programs. Embedding employability in the curriculum seems to be a common approach and one which requires less time and resources (Artess et al., 2017; Pedagogy for Employability, 2006). Additionally, embedding employability in curriculum does not require extensive redevelopment of courses or the implementation of institution-wide initiatives. It is a way individual faculty can address employability in their courses and adjust based on their own teaching philosophy and style. There are resources and toolkits that can support faculty to embed employability in their courses (see Knight & Yorke, 2002; Pedagogy for Employability, 2006; Pegg, et al., 2012).

The Career Integrated Learning project at Memorial University is an example of an initiative to embed employability skill development in academic courses. The program aimed to help students identify competencies developed through their academic courses. The project coordinators worked with course instructors to identify which competencies were associated with course assignments (Shea, n.d.). For example, a group project may aid in the development of teamwork skills, communication skills, ethics, and an individual's work preferences (Shea, n.d.).

These competencies were then listed in the course syllabus and no other curricular elements were changed. The course instructor had the autonomy to determine where the competencies would be listed in their syllabus. The project did not aim to assess competency levels, but rather encourage student reflection about their competency development and capabilities. The grassroots approach of the project aimed to be faculty member and student-driven. During the term, the researchers went into the course three times; first to introduce the project, then to check-in on the project, and finally to conduct a short survey about student perspectives regarding their competencies. Seventy-two percent of students who completed the survey agreed that developing awareness of the competencies practiced in their course was helpful to them (Shea, n.d.). Results also suggest the project helped students articulate their competencies, which would be useful in their future work searches (Shea, n.d.).

Initiatives to embed employability in existing curriculum are possibly a way to create additional faculty buy-in to the employability agenda. In the Career Integrated Learning project, for example, faculty members made decisions about which skills would be listed in their syllabus and where they would be listed. This autonomy to make the best decision for their course and teaching style, may have helped to create support for employability development. The results also demonstrate that small changes, which require little effort from faculty, can make a difference in employability.

Based on the complexity of employability, a uniform approach will likely not reach all students (Pegg, et al., 2012). Artess et al. (2017) suggest structural, program, and curricular changes can help address employability, but so can providing additional extra-curricular opportunities. Regardless of the approach, students need to be aware of what they are learning and the connection between their academic work and employability. More systematic research is

needed about the effectiveness of employability initiatives; many studies are small or confined to specific disciplines, such as business (Artess et al., 2017). Higher education institutions can implement employability initiatives, but until students are included in the conversation the initiatives risk missing the mark.

Summary

This chapter provided a review of literature related to the employability agenda. The reviewed literature highlights the complexity of employability and the various perspectives, such as employers and faculty members, who are involved in the employability agenda. However, we do not yet know enough about undergraduate student perspectives on employability, in particular, the perspectives of students in general, non-professional programs. Self-efficacy theory may be a useful approach for incorporating student engagement with employability skill development. Specifically, the literature highlights that further research into the relationship between employability skill development and self-efficacy is needed. Employability initiatives have been implemented in many higher education institutions and there are a variety of approaches to address employability, such as embedding employability in curricula. In order to engage faculty members in employability initiatives, especially those within their courses, further research is needed on their perspectives about employability.

The following section, chapter three, discusses the methods used to conduct the study and analysis of data. In order to capture both student and faculty member perspectives on employability, this mixed methods project collected data from both audiences.

Chapter 3: Methods

Overview

The aim of this project was to gain further insights into the employability skills of undergraduate students in non-professional faculties, with a focus on the skills developed through curricular activities. Mixed methods methodology, as described by Creswell and Plano Clark (2018), was used to gain insight into students' perspectives on employability skills. The research site was the University of Alberta, which is a large, research-intensive university in Western Canada. Non-professional faculties at the university, where the academic program does not lead to a professional accreditation, were selected as the specific research sites. Mixed methods was used to capture the perspectives of both students and faculty members. Faculty members, in many ways, are the gatekeepers to students; if they do not care about employability or are unaware of employability development through classes, they may be unlikely to discuss this with students. Qualitative data were collected through interviews with faculty members and quantitative data were collected from students in the faculty members' courses using a survey. The project's methodology and research design are discussed in this chapter.

Methodology

I selected mixed methods as the methodology for this research project. Mixed methods research involves the collection, analysis, and integration of qualitative and quantitative data. Creswell and Plano Clark (2018) explain that mixed methods has evolved beyond simply being a method to a methodology with its own vocabulary and techniques. Mixed methods can be used to answer research questions that would not be sufficiently answered by only one type of dataset (Plano Clark & Creswell, 2014). In the case of my project, mixed methods helped me to obtain more complete and thorough results about employability skill development in higher education

than a qualitative or quantitative study. Plano Clark and Creswell (2014) explain that "by combining quantitative and qualitative data, therefore, researchers argue that the study can develop a more complete picture of social phenomena that includes both trends and individual's experiences" (p. 386). In my project I examined the perspectives of two different populations, which required different methods to collect their data. As such, a mixed methods approach was best suited to my project.

The overarching purpose for applying a mixed methods approach was to provide guidance on the timing, priority, and integration of quantitative and qualitative datasets. Creswell and Plano Clark (2018) focus on three core designs within mixed methods research: explanatory sequential design, exploratory sequential design, and convergent design. The intent of using mixed methods would therefore be to explore or explain the initial data set in greater detail, or to converge the qualitative and quantitative data for a better understanding of the topic (Creswell & Plano Clark, 2018). The core mixed methods design also indicates in which order the datasets are collected and analyzed, either concurrently or sequentially, and how the datasets will be combined.

In my research project, I used a convergent design. In a convergent design, the qualitative and quantitative results are collected concurrently, but separately, and compared to develop a multi-perspective understanding of the topic. A convergent design allowed me to compare and contrast students and faculty members' perspectives on employability skill development. As my project involved two populations, faculty members and undergraduate students, I had to consider that each population would warrant different data collection procedures.

A convergent mixed methods design provides the framework for collecting, analyzing, and comparing the data from undergraduate students and faculty members. There are four

primary steps in the convergent design: design and collection of quantitative and qualitative datasets, analysis of quantitative and qualitative datasets, merging of the two datasets, and interpretation of the merged results (Creswell & Plano Clark, 2018). The procedures for the design, collection, and analysis of the datasets follows those of quantitative and qualitative research. The datasets are collected concurrently, but at this phase are independent of one another. The datasets were also analyzed independently of each other using appropriate methods; quantitative data were analyzed using statistics, whereas qualitative data were analyzed thematically. After separate analysis, the results were merged and interpreted together. The final stage was to provide insight into how the results converge or diverge, which led to a multi-perspective understanding of the research problem.

Mixed methods research applies a notation system to describe the various designs used within this methodology. Qualitative and quantitative are shortened to qual and quan respectively. Uppercase and lowercase letters are used to indicate the priority of the datasets. A plus sign (+) indicates that qualitative and quantitative methods were done concurrently. My research project, therefore, used the following notation to indicate the convergent design and the priority placed on the quantitative data: qual + QUAN + qual.

In the remainder of this chapter, I review my research questions and discuss the research design for my project, including procedures used for sampling, data collection, data analysis and data merging.

Research Questions

Creswell and Plano Clark (2018) encourage researchers to state at least three research questions in mixed methods research: a quantitative research question, a qualitative research

question, and a mixed methods research question that addresses how the datasets will be merged. As such, I have developed the following research questions for this project:

Quantitative:

- *(RQ1)* What are undergraduate students', in non-professional faculties, perspectives on employability skill development in their course work?
- *(RQ2)* What, if any, influence does identifying employability skills in courses have on undergraduate students' self-efficacy?

Qualitative:

- *(RQ3)* What are faculty members' perspectives on employability skill development within their undergraduate courses?

Mixed:

- *(RQ4)* Using the results from RQ1, 2, and 3, in what ways are students' and faculty members' perspectives about employability skill development in alignment with one another?

Research Design

The research design of this project was based on the Career Integrated Learning project at Memorial University (Shea, n.d.). This project's researchers, Rob Shea and Rhonda Joy, worked with faculty members at Memorial University to identify competencies practiced in courses. These competencies were then listed in the course syllabi and discussed with students. The project aimed to encourage students to think about what competencies they were developing in their courses. The Career Integrated Learning project served as a framework for my research design. However, I deviated from their design in some areas. My project focused on employability skills, rather than competencies, and incorporated the concept of self-efficacy. In

both projects, it was paramount that faculty members had the autonomy to determine what competencies, or employability skills, were relevant to their course and that they did not have to make any other changes to their course curricula. I had the opportunity to discuss the Career Integrated Learning project with both Rob Shea and Rhonda Joy (personal correspondence, March 29, 2017 and June 23, 2017).

My project involved working with faculty members, who teach undergraduate courses, to identify the employability skills practiced in their course and provide students with a listing of these skills. The students in the courses were invited to participate in a survey to provide their feedback on employability skills. The survey did not aim to assess students' development of employability skills, but rather collect data about their perceived capabilities, awareness of employability skill development, and expectations regarding employability skill development. The project was reviewed and approved by the human research ethics board at the research site, including participation and consent letter (see Appendix A), interview guides (see Appendices B and E), and the survey information consent and questions (see Appendix D).

In the remainder of this chapter, I provide a description of my project's research design, including procedures for sampling, data collection, data analysis, and exploring similarities and differences of the datasets. Procedures for both datasets, quantitative and qualitative, will be discussed in order of how they were collected.

Sampling procedures.

Sampling for the project began with recruiting faculty members to participate. Purposive sampling was used to select three faculty members from three different faculties at the research site. Faculty members were recruited based on two key criteria: must teach a 200- or 300-level undergraduate course in the 2018 winter term and must teach in a non-professional faculty at the

research site. Non-professional faculties were considered faculties were the students do not graduate with a specific career or professional designation, such as nursing or education. As discussed in the literature review, some research on employability has been conducted with undergraduate business students. However, I was unable to find any research on employability with students from general programs, such as humanities or sciences. The disciplines included in this study have yet to be focused on in the employability literature. Consequently, I focused my sampling on faculty teaching in general programs in the arts, social sciences, and natural sciences. In the 2017 fall term, twenty faculty members were contacted and invited to participate in the study. I began sampling by soliciting input from colleagues around the research site who would know of possibly interested faculty members. This resulted in the recruitment of two faculty members, both in the natural sciences. I wanted to ensure maximal variation sampling for the project, where the participants would possibly have diverse perspectives on employability, and not only have faculty members from the same disciplines. To recruit a faculty member from the social sciences, I reviewed the course listings and contacted faculty listed as teaching in the winter term. This technique also proved unsuccessful. Ultimately, a faculty member in the social sciences, who I had worked with on previous projects, agreed to participate. Consequently, three faculty members were selected for the project and they each taught a 200-level course.

Convenience sampling was used to select the student participants. All students in the three courses taught by the participating faculty members were invited to participate in the project. Student participation was voluntary and was not in any way connected to their course grade.

Data collection.

Three methods were used to collect the data for this project: interviews with faculty members, the employability skill inventories for each course, and a survey distributed to students in the courses. Classroom observations were also included in the initial data collection plan. However, due to unexpected personal circumstances I was unable to collect this data. As mentioned, convergent mixed methods design was used to collect the quantitative and qualitative data.

To commence data collection, I requested and obtained the course syllabi from each of the participating faculty members. Using the Conference Board of Canada's (n.d.) inventory of employability skills, I analyzed each syllabus to identify the employability skills that could be addressed in the course. I selected this inventory because it is commonly used by career services, is not discipline specific, provides a succinct, yet thorough, description of each skill, and uses familiar language that is easy to understand. This inventory includes 56 skills organized into three categories: fundamental skills, personal management skills, and teamwork skills. I created a unique inventory for each course.

Next, the faculty members participated in semi-structured interviews. The interviews asked faculty members' about their perspectives on employability skill development in higher education, if employability matters in higher education, the extent to which students develop employability skills through their academic course work, and in what ways they currently address employability in their coursework (see Appendix A for the interview guide). The interviews addressed RQ2: What are faculty members' perspectives on employability skill development within their undergraduate courses? Informed consent was obtained at the start of the interview (see Appendix A). The interviews were conducted in person and were scheduled

based on the faculty members' availability. The faculty members also provided feedback on the employability skills inventory for their course; the faculty members made the final decisions as to which skills were included in their inventory. The first three interviews were conducted at the start of the academic term (early January 2018).

Following the interviews with the faculty members, I attended each of their classes to provide a brief presentation about employability skills, the inventory, and my project (see Appendix C for an overview of the presentation). The inventories were shared with the students during these classes. Two of the faculty members opted to post their inventory online and I printed copies for the third class. Data were not collected during the in-class presentations.

I returned to each of the classes during the eleventh week of the term to deliver the survey. The survey data aimed to answer RQ1 and RQ2. Specific dates were arranged with each faculty member based on their availability in order to avoid any conflicts with other class activities. Students were provided with fifteen minutes during their class to complete the survey. In each class, I gave a brief overview of the research project, employability skills, and informed consent for the survey. Students were free not to participate and their participation was not tied to their course grade. Students completed the surveys electronically and paper copies were available for those who did not have access to an electronic device. Survey monkey was used as the survey platform.

The survey was based on the self-efficacy questionnaire and the employability experience questionnaire, both developed by Yorke and Knight (2007). Both questionnaires include a series of statements with a Likert-type scale. I included 27 statements and used a six point Likert-type scale from strongly disagree to strongly agree. I modified the statements used in Yorke and Knights' (2007) questionnaires to reflect the Canadian language use and higher education

context. In addition to these statements, I included demographic questions and three open-ended questions. The open-ended questions collected additional student comments on employability. I piloted the survey with undergraduate students at the research site. I sent the pilot to 30 students I knew at the research site and I received 13 responses. Based on the students' feedback I made minor revisions (see Appendix D for the survey).

At the end of the term, I conducted a second interview with each of the participating faculty members. The second interviews were also semi-structured and similar questions were asked as in the first interview (see Appendix E). Prior to the second interview, I did a brief analysis of the students' survey results. Based on the results, I included three additional questions in the second interview. The faculty members were asked if they think students recognize their employability skill development. I also asked faculty members to describe where they think the balance is between what they do for employability and what students need to do, and how they will continue to address employability in their courses. All interviews were audio recorded and transcribed.

Data analysis.

Data analysis in mixed methods research involves separately analyzing the quantitative and qualitative datasets using analysis methods appropriate to each form of data, followed by integrating both results (Creswell & Plano Clark, 2018). In my project, quantitative data consisted of the closed-ended survey questions and the employability skill inventories for each course. Qualitative data were collected through the interviews and the open-ended survey questions.

I started data analysis first by transcribing the interviews and preparing an initial thematic overview of each participant's interviews. Each faculty member received transcripts of both their

interviews and a thematic overview of their interviews and were asked to provide feedback about both. At this point, I also started analysis of the quantitative survey data. This analysis focused on descriptive statistics, including means, standard deviations, and response variances. I used the survey to gain insights rather than to generalize the data; as such, I limited my data analysis to descriptive statistics. Next, I filtered the data by demographics to determine if significant differences between gender, year of study, faculty, and employment status existed. A 1-tailed t-test of equal variance was conducted to determine significance between subjects. I analyzed the employability skills inventories for frequency of skills to determine which skills were included in all three courses, and if there were any skills not included in any course.

I analyzed the interviews and open-ended survey data using a general qualitative approach (Merriam & Tisdell, 2016). This approach involved reviewing the interview transcripts and assigning codes to the data in order to answer the research questions. I did this by first reading the transcripts for the first round of interviews, writing notes about the interviews, and identifying key concepts in the data. I repeated this process for the second round of interviews. Merriam and Tisdell (2016) use the analogy of a forest (big picture) and trees (particular elements) to describe the process of qualitative data analysis. The codes I identified are the trees, whereas the forest is the broad, overall categories that emerge in the data. Merriam and Tisdell recommend moving between the trees and the forest to ensure they support one another; the trees, or codes, should build into the forest, or categories. I kept this analogy in mind while reviewing and comparing the interview transcripts. As more categories emerged, I combined some into subcategories. I used Quirkos™, a qualitative data analysis software, to help organize the data in categories and subcategories. I initially analyzed the first and second round of interviews separately in order to develop separate categories. I then compared the categories

between the interview rounds to analyze for similarities and changes between the two rounds of interviews. A similar process was used to analyze the open-ended survey data.

Credibility procedures.

Procedures for judging the credibility (e.g., validity and trustworthiness) of results varies between qualitative and quantitative research. As such, I applied different approaches for credibility checks within my project. In this study, I used the terms 'validity' and 'validity threats' to be inclusive of both the qualitative and quantitative research design. Within mixed methods research, Creswell and Plano Clark (2018) define validity as "employing strategies that address potential threats to drawing correct inferences and accurate assessments from the integrated data" (p. 251). In convergent design, threats to validity include not using parallel concepts in data collection, having unequal population sizes, not integrating the datasets, and ignoring disconfirming results between the datasets. I addressed these validity threats in several ways. Employability, the core concept of my research project, was central to both quantitative and qualitative data collection. However, students were asked questions about their perceived self-efficacy in relation to employability, whereas faculty members were not. Self-efficacy is a highly personal and context-specific construct; I decided it would not be appropriate for faculty members to make assumptions about their students' self-efficacy (Bandura, 1997). Using equal population sizes was not appropriate for this project as it would have significantly limited the number of students invited to participate. By using a survey to collect quantitative data from students, I was able to solicit a greater number of responses and add greater breadth to the project than if I had interviewed students. Lastly, integrating the data sets was an essential piece of the project. Faculty members can play a significant role in students' employability development, as such their perspectives could not be ignored.

For the survey data, I chose not to conduct inferential statistics as I did not aim to generalize the results. Employability and self-efficacy, which are addressed in the survey, are individual, context-specific constructs (Yorke & Knight, 2007). Further, Yorke and Knight (2007), who developed the questionnaires I based my survey on, argue that self-efficacy and employability cannot be measured or generalized due to their context-specific nature. For example, a student may have strong beliefs in their ability to do well in a class, while also believing they will struggle to get a job after university. We cannot assume high self-efficacy beliefs can be generalized to other contexts or individuals within the same sample population. Consequently, Yorke and Knight (2007) did not aim to develop a measurement instrument that could be used for generalizations. Rather their questionnaires aimed to provide insight to local groups of students, and to encourage reflection among these students (Yorke & Knight, 2007). I did, however, pilot the survey to undergraduate students to solicit feedback about question wording, comprehension, and length. The questions from Yorke and Knights' (2007) questionnaires were originally reviewed with two undergraduate students to assist me in adjusting the wording of the questions to better fit a Canadian context. I then sent the electronic survey to 30 undergraduate students and requested their feedback. I received 13 responses from the pilot. After the pilot, no further revisions were made to the survey.

For the interview and inventory data, I conducted a member check with the participating faculty members. The faculty members were provided with the transcriptions and a thematic overview for their interviews in order to check for consistency and accuracy of interpretation. They also had final say over which employability skills would be included in their course's inventory.

Merging procedures.

Following the separate analysis of the quantitative and qualitative data, the results were compared to explore the alignment between students and faculty members' perspectives on employability skills. Within mixed methods research, this is often referred to as integrative thinking (Creswell & Plano Clark, 2018). Integration is the ultimate goal of mixed methods research, it is not simply about collecting both qualitative and quantitative data (Creswell & Plano Clark, 2018). Creswell and Plano Clark (2018) describe several methods for integrating results and they suggest the selected method should reflect the type of mixed methods design. As my project used convergent design, where both datasets were collected concurrently rather than sequentially, I compared the datasets. This comparison aimed to answer my fourth research question: in what ways are students' and faculty members' perspectives about employability skill development in alignment with one another? To compare the results, I looked for common concepts across the datasets and compared the quantitative and qualitative results for each concept. I analyzed these concepts to assess how the results confirmed, disconfirmed, or expanded on each other. Through this process, I compared and contrasted students' perspectives on employability skills with those of the faculty member participants.

Summary

In this chapter, I provided an overview of the mixed methods methodology and research design used in my project. In the next chapter, I share my data analysis for both the quantitative and qualitative datasets.

Chapter 4: Results

Overview

In this chapter, I will review the results collected in this mixed methods project. The aim of this project was to learn about undergraduate students and faculty members' perspectives about employability skill development in academic courses. A concurrent mixed methods design was used to collect data from faculty members and the undergraduate students in their courses. The results were reviewed in the order they were collected: interviews, skills inventories, survey, and interviews. The faculty members who participated in this project participated in two interviews each; one at the start of the term and the second at the end of the term. Students also provided qualitative data through the open-ended responses in the survey.

Exploring perspectives on employability.

Analysis of the qualitative and quantitative data focused on gaining insight into both students and faculty members perspectives on employability, relating to RQ1, and RQ3. Through analysis, I also aimed to answer RQ2, to determine if identifying employability skills in course work effects undergraduate students' self-efficacy.

Participant details.

This project was conducted at a large research-intensive university in Western Canada, which was selected because of ease of accessibility to participants. Three faculty members were recruited to participate in the project during the Winter term of 2018. I recruited faculty members from different disciplines who were not teaching in a professional faculty; that is, a faculty where students are pursuing a specific, professional designation, such as nursing, education, or pharmacy. I assigned codes to each of the faculty members. Faculty A and C teach in the natural sciences; both are full professors and have previously also held senior administrative roles at the

institution. Faculty A teaches in a field that has industry connections and students can attain employment in this industry at the bachelor's level. Faculty C teaches in an applied field and also has close connections to industry. Both A and C have had long teaching careers at the University of Alberta. Faculty member B teaches in the social sciences and is an Associate Professor. This participant also served as the Associate Undergraduate Chair for her department at the time of data collection. All faculty members taught a 200-level undergraduate course in the Winter term of 2018. Recruiting faculty members for this project was challenging and I had multiple other faculty members refuse to participate. I had a prior relationship with the three faculty members who participated in the project, which I believe helped convince them to participate in the project. They are all also very invested in the success of their students and wanted to help me pursue this research project. The students in their courses were all invited to participate in the survey component of the project. Student participation was voluntary and was not connected to their course grade. Further details about the students are provided later in this chapter.

Interview 1

The three faculty members participated in individual interviews at the start of the Winter term of 2018. The interviews were semi-structured. The purpose of the interviews was to collect faculty member perspectives about employability skill development, addressing RQ3, and to review the employability skill inventories for each course. The interviews were also an opportunity to assess what, if anything, the faculty members were doing to address employability in their courses. The faculty members also participated in a second interview at the end of the project. The results from the second interview are discussed later in this chapter.

The interviews were recorded and I transcribed them. I analyzed the transcripts for themes, which were organized into several categories. The faculty members were provided with their transcripts, which included the identified themes, and asked to provide any feedback.

I identified five thematic categories from the first round of interviews: definitions of employability, importance of employability, skills awareness, curriculum and teaching, and career exploration for students.

Definitions of employability.

This project asked the participating faculty members to consider a concept that is not often at the forefront of their work: employability. Participant A mused: "I don't normally think about employability." As employability is not the focus of their work, I asked each participant to describe their understanding of employability and employability skills. All participants touched on how employability is about getting a job and gaining skills that will help in this pursuit. "Employability skills are what they're going to get out of this course that's going to help them in getting a job" (Participant A). Participant B responded:

> If I'm forced to, if I'm compelled to, I would think of employability as the capacity to bring skills to a particular job, but I guess that's what employability is. Having a list of skills that you use to convince an employer to take you on.

She also described employability as a "catchphrase" focusing on skills that are valuable in work, but also emphasized that these skills are "not the whole point of work" (Participant B).

Participant C expanded on employability to include not only the students' skills, but also their interests:

> I would say employability is the ability for a student to be employed in their number one job area. Based on interests, education, where they see themselves being. And not just, I

think that's different than getting a job at McDonalds. It's getting a job that uses their skill set and captures their interests.

These definitions of employability focus on securing work, on becoming employed following graduation. Employability skills, therefore, support students in securing work. Participant C's perspective addressed that students are looking for work in their areas of interest, and that this work will ideally be commensurate with their level of education.

Importance of employability.

In the first interviews, all participants addressed the varying degree to which employability is important to them and to students. For participant A, the extent to which employability matters "depends on the program that you're teaching in." "There's a continuum of opinion, I think, from not at all to very important (Participant A)." Whereas for students, employability is likely more important: "From their perspective it's much more important that they develop these skills to be employable. Particularly given the job market right now, at least at the bachelors level (Participant A)." The importance of employability may vary between academic disciplines and there may be a greater focus on it in more applied areas: "Most students come into [our faculty] with the expectations of getting an education to work and to be employed in the area of agriculture (Participant C)." As Participant C teaches in an applied discipline, employability is central in his teaching; "So it's pretty important for what I teach. We ask students, 'where do you see yourself being?' and most of those would be employed in the industry of animal science." Participant B teaches in the social sciences, an arguably less applied field. She recognizes that employability is not "part of what we do in the classroom." However, she also recognizes the importance of employability: "I think it matters to entering students, I

think it matters to their parents. I think it matters to students in their last term." She also said employability is "part of the sales pitch" of higher education.

Participant A also addressed the importance of employability to future employers. "It's a common refrain that they're [employers] not terribly happy with the level of writing and communication skills that our students have." It is important to note that this participant teaches in a discipline with strong connections to industry. This discipline is aware of the avenues their students pursue following graduation; as such, participant A tailors his courses to address these common career paths.

The value of employability, therefore, varies and we cannot assume all faculty will recognize, or even care, about its importance in higher education. The participants' perspectives highlight that they know employability is important for their students. Acknowledging that the sample is small, the data also indicate the possibility of uneven importance between disciplines and perhaps a variation of perspective between professional and non-professional disciplines.

Skills awareness.

During the first interview, I reviewed the skills inventory with the faculty members to adjust and gain further clarity about their courses. Consequently, we spent a lot of our time discussing skills and the ways in which their students develop, or do not develop, skills in their courses. For participant B: "I think actually the most important skills that they gain from university are probably creativity, hard work, work ethics, and a capacity to roll with the punches of work in the work world." She recognized that students develop marketable skills but expressed concern that they are not aware of their skill development. "I don't think they are often aware of the skills that they've learned. Part of this is sort of denigration of the arts and humanities - they sort of capitulate to that idea that it's not skill building." However, participant

A, who teaches in the natural sciences, reinforces that his own awareness of students' skill development was minimal: "Given my reaction to your document, it's pretty clear that my awareness was pretty low. Projecting I would like to think they were at least as naive as I am, or they might be more conscious of it."

Participant C suggested that skill awareness may also change depending on where students are at in their degree:

> Some of these kids in first year aren't even thinking about employability yet, because they're just thinking about this course being a course they fill in on their check sheet. But some of the senior students are actually applying for jobs now, and once that happens, they're totally engaged.

Students may not feel the need to consider what skills they develop until closer to the end of their degrees. In the earlier years of their degree, they may not have yet considered what type of employment they will pursue: "I think that students often don't, until the very end, think carefully about what they're doing. I think they chug through the classes - what class do I need to take next - and they go from class to class (Participant B)."

The skills students are learning in higher education may seem intangible or nontransferable to other contexts, such as work. "I think that they sometimes throw their hands up in the air and say 'well I learned to read Chaucer but nothing else.' But learning to read Chaucer is a big deal (Participant B)." Participant B described skill translation - by which she means understanding what skills are learned when reading Chaucer - as the issue for many students: "I would say that they're probably developing skills that they don't know - there's a problem with translation, how to describe these skills that they've developed in school in a way that makes sense to an employment situation."

Assisting students with skill translation may help to increase their awareness. Participant B explained that "they [students] often do not have the language for it" and that she could help them with this translation. She reflected that "if it's a matter of spending 20 minutes every two weeks on translation" this would be valuable to students and feasible for her. She feels that students do not recognize that the skills they are learning can be important for future work, such as communication or "taking large bundles of information and turning them into something useable." The issue, according to participant B, stems from translation; the students do not know how their academic skills transfer to other contexts, such as work.

Participant C tied students' awareness of employability skills to their engagement in his course: "Some students will be quite content with just getting enough to get by, which those ones likely won't gain much employability skills." For participant C: "If you have somebody who just comes to class, just does the exam and the project material, they wouldn't get as much out of it for employability, because they wouldn't have gotten their hands as dirty as the students doing the extra work."

For students and faculty, awareness of employability skills seems to be an issue. In the earlier years of their degrees, students may not yet consider employability and where they want to go next. Or students and faculty may lack the language and tools to identify and translate skills to non-academic contexts. Or skill awareness may be connected to students' engagement in their courses. It seems that helping faculty members increase their awareness of employability skills, may also help students become more aware of these skills. Faculty members can help students translate the skills needed to read Chaucer, or complete a lab assignment, to non-academic situations, such as employment settings.

Curriculum and teaching.

When asked if and how employability is addressed in their courses, the faculty members answered candidly: "The honest answer to that would be I don't (participant A)." To participant B, employability is not a focus of her teaching, but she recognizes the role it will play in her students' lives:

> I teach in the humanities, and my background is in the humanities, I'm not thinking about jobs. I'm thinking about people, whole people. Who are also workers, right? I don't avoid the fact that students are going to be workers one day. But I'm not in the classroom saying you'll need this so that you can be a good social worker, or a good receptionist.

Conversely, participant C addresses employability throughout his teaching: "Well I talk to them a lot about it, even this morning's first class. I talk to them about taking advantage of opportunities." Consequently, employability plays a diverse role in faculty members' teaching: from unintentional to explicit.

Academic content is king, leaving employability on the sidelines. Participant A explained: "I think that certainly in the courses we focus exclusively on the academic content, there's very little if any thought given to the other bits of employability skills, or knowledge, skills, and attributes." Academic content aims to help broaden students' perspectives and develop a foundation they will need in higher level courses. "We teach students how to pay attention to the world around them, and interpret it, and figure out how to maneuver through it (Participant B)." However, she adds "I don't talk about what we do in the classroom through the lens of employability (Participant B)."

The faculty members considered ways they address employability in their classes, even if this is unintentional. Participant B discussed department pressure to address skill development:

> The chair has asked that in an ongoing way we make general references to the skills they're building. So once in a while we'll read a really hard text and I'll say, 'do you see what you did there? And you could do this, you could use this skill of reading Simone De Beauvoir to read a government document. This can be just as obscure and difficult. So, I do that from time to time.

In other courses, skill development and awareness are less intentional. Participant A recognized skill development is happening in his courses, but it is not always deliberate:

> Because, you know and I think in terms of the technical, or the academic part, we've got that covered in terms of our curriculum, we keep tweaking that to make sure it's relevant. It's the other bits, the communication, that we're not as deliberate about. So, I think that's where we could actually be thinking about how to do that better. I think they do get a lot of that by accident.

As participant C's course is more applied, students had multiple opportunities to learn about the academic content outside of the classroom:

> We take them on tours of farms and that's where they get to see firsthand where the farmers talk about how they got to where they're at. Some of the guest speakers that come in are grad students who talk about their careers and what they did as an undergrad to get into grad school. So it's pretty applied, we do a lot of that kind of work.

These opportunities help students apply what they're learning and explore career options, but they do not inherently address employability skill development. Participant C seemed to recognize this dilemma so he talked to students about "flushing out" their resumes to include these opportunities, "making you more employable."

In addition to content is king, there are multiple reasons for not addressing employability in their teaching. Participant A suggested limited time for faculty members. “Where I think we’re failing them, and maybe that’s too strong of a word, is giving them more opportunities to do the sort of writing they might do once they get out. And that’s a logistical issue.” He suggested providing students with writing assignments they would build on over the semester while receiving ongoing feedback. However limited time seems to prevent him from doing this type of assignment. Devoting time to employability would also take away from students’ academic work. Participant B explained: “One of the arguments would be that if we devote half of a class to career skills and CV building, students have lost half a class to do something that they’ll never do otherwise, which is scholarly work.”

In addition to limited time, faculty members also have limited experience in teaching about employability. “Most of us have had a few crap jobs when we were students and then moved into this environment, which is very specific and it’s not like other jobs (Participant B).” Students have a great deal of contact with faculty members, but we cannot assume all faculty are able or willing to teach about employability. Participant B recognized there is value in having faculty do this, but questioned if faculty are well suited to address these areas. “I suspect it would probably work better if faculty were somehow involved, but we’re not career counsellors and we do not know much about the world of work.” She recognizes that she does not “know what an employer wants”.

Career exploration for students.

Although the participants addressed employability to varying degrees, they all recognized the value in helping students learn about potential career options and in incorporating these options into their teaching. Participant A mused: “to some extent, we need to be cognizant of

what our students are doing after they get out." Participant C's course provided students with opportunities to visit farms and hear from industry guest speakers; these activities help the students learn about career options in their field.

> Farm Credit comes in and gives every student a backpack with Farm Credit on it, to tell them to consider careers working for them when they graduate. And a lot of these students would never realize that with an Animal Science degree you can work for a lending institution.

Through these connections with employers, students can learn about what can make them more employable. Participant B connects current students with alumni from her program: "I'm putting our undergraduates, mostly senior undergraduates, in contact with students who've moved on into the world, and they are doing interviews. So they're talking to one another and learning about the world of work." These opportunities help students learn about what careers they can pursue post-graduation and how they can apply what they have learned through their degree to the world of work.

Skills Inventories

In collaboration with the faculty members, I developed a skills inventory for each of their classes. I used the Conference Board of Canada's (n.d.) Employability Skills listings to develop the inventories. The Conference Board of Canada includes 56 skills, which are organized into three categories: fundamental skills, personal management skills, and teamwork skills. I conducted an initial analysis of each courses' syllabus to determine which skills may be developed in the course. I discussed the inventories with each faculty during their first interview and made adjustments based on their ideas and preferences. Table 4.1 lists the skills and indicates in which courses the skills were identified.

Table 4.1

Employability Skills Identified for Participating Courses

	Course		
	Course 1 Science (applied) (C)	**Course 2 Science (A)**	**Course 3 Arts and Humanities (B)**
Fundamental Skills			
Communication			
Read and understand information presented in a variety of forms (e.g., words, graphs, charts, diagrams)	X	X	X
Write and speak so others pay attention and understand	X	X	X
Listen and ask questions to understand and appreciate the points of view of others	X		X
Share information using a range of information and communications technologies (e.g., voice, e-mail, computers)	X	X	X
Use relevant scientific, technological, and mathematical knowledge and skills to explain or clarify ideas	X	X	X
Manage Information			
Locate, gather, and organize information using appropriate technology and information systems	X	X	X
Access, analyze, and apply knowledge and skills from various disciplines (e.g., the arts, languages, science, technology, mathematics, social sciences, and the humanities)	X	X	X
Use Numbers			
Decide what needs to be measured or calculated	X	X	
Observe and record data using appropriate methods, tools, and technology	X	X	
Make estimates and verify calculations	X	X	
Think and Solve Problems			
Assess situations and identify problems	X	X	X
Seek different points of view and evaluate them based on facts			
Recognize the human, interpersonal, technical, scientific, and mathematical dimensions of a problem	X	X	X
Identify the root cause of a problem	X		X
Be creative and innovative in exploring possible solutions	X		X
Readily use science, technology, and mathematics as ways to think, gain, and share knowledge, solve problems, and make	X	X	

decisions			
Evaluate solutions to make recommendations or decisions	X		
Implement solutions			
Check to see if a solution works, and act on opportunities for improvement			
Personal Management Skills			
Demonstrate Positive Attitudes and Behaviours			
Feel good about yourself and be confident			
Deal with people, problems, and situations with honesty, integrity, and personal ethics	X	X	X
Recognize your own and other people's good efforts	X		
Take care of your personal health			
Show interest, initiative, and effort	X	X	X
Be Responsible			
Set goals and priorities balancing work and personal life	X	X	X
Plan and manage time, money, and other resources to achieve goals	X	X	X
Assess, weigh, and manage risk			
Be accountable for your actions and the actions of your group	X	X	X
Be socially responsible and contribute to your community			
Be Adaptable			
Work independently or as part of a team	X	X	X
Carry out multiple tasks or projects	X	X	X
Be innovative and resourceful: identify and suggest alternative ways to achieve goals and get the job done	X		
Be open and respond constructively to change	X		
Learn from your mistakes and accept feedback	X	X	X
Cope with uncertainty	X	X	X
Learning Continuously			
Be willing to continuously learn and grow			
Assess personal strengths and areas for development	X	X	
Set your own learning goals	X		
Identify and access learning sources and opportunities	X	X	X
Plan for and achieve your learning goals	X		
Work Safely			
Be aware of personal and group health and safety practices and procedures, and act in accordance with them	X	X	
Teamwork Skills			
Work With Others			
Understand and work within the dynamics of a group	X		X

Ensure that a team's purpose and objectives are clear	X		
Be flexible: respect, and be open to and supportive of the thoughts, opinions, and contributions of others in a group	X		X
Recognize and respect people's diversity, individual differences, and perspectives	X		X
Accept and provide feedback in a constructive and considerate manner	X		X
Contribute to a team by sharing information and expertise	X	X	X
Lead or support when appropriate, motivating a group for high performance	X	X	
Understand the role of conflict in a group to reach solutions	X		X
Manage and resolve conflict when appropriate	X		
Participate in Projects and Tasks			
Plan, design, or carry out a project or task from start to finish with well-defined objectives and outcomes	X	X	X
Develop a plan, seek feedback, test, revise, and implement	X		
Work to agreed-upon quality standards and specifications	X	X	X
Select and use appropriate tools and technology for a task or project	X	X	
Adapt to changing requirements and information	X	X	X
Continuously monitor the success of a project or task and identify ways to improve	X	X	X

The number of skills varied between each course. Course one had 48 skills, and both courses two and three had 31 skills. Courses one and two, both science courses, had lab components. However, course one involved a large group project. This course is also in an applied field and the faculty member has strong connections to industry, which likely resulted in more skills being addressed in the course. Course three, an Arts and Humanities course, was lecture only, but involved discussions, readings, and multiple writing assignments. Twenty-three common skills were identified in all three courses. Eight skills were not included in any of the courses.

It is important to note that this project did not aim to assess whether or not these skills were developed or enhanced in these courses. A future project could evaluate whether or not the

skills are developed or to assess students' self-efficacy levels in these skill areas. However, as self-efficacy is a context-specific trait, it would be challenging to generalize skill levels beyond the courses.

The inventories for each course were shared with the respective students at the start of the Winter term of 2018. I also gave a brief presentation about employability skills and the project to the students at the start of the term (see Appendix C).

Survey

Students enrolled in the three faculty members' courses were invited to participate in a survey about their perspectives on employability skills, addressing RQ1. In total, 195 students were registered across the three courses. One hundred and thirty-one students responded to the survey (response rate was 67%). All courses involved were undergraduate; consequently, it was assumed that all students were studying at the undergraduate level. None of the survey questions were mandatory for respondents. A series of demographic questions were asked at the start of the survey in order to learn more about the population. The same survey instrument was used across the three classes and the students were not asked in which class they were enrolled. Rather, students were asked in which faculty they are enrolled. The majority were studying in the Faculty of Agricultural, Life and Environmental Sciences ($N = 75$; 60%). Eighteen students (14.4%) were enrolled in the Faculty of Arts, and 24 students (19.20 %) were enrolled in the Faculty of Science. Five other faculties were represented, but each had less than three respondents.

In regard to gender, 93 (73.23%) of the respondents identified as female and 33 (25.98%) identified as male. Respondents were also given the option to decline to answer or indicate other,

where they could type in their gender. One respondent declined to answer and no respondents indicated other. The majority of the respondents, 117 (91.41%), were between the ages of 18-24.

Although all three courses were at the 200 level, the year of study varied between the respondents. The majority, 44 respondents (34.92%) identified as being in their second year. Twenty-seven respondents (21.43%) were in their first year, 36 respondents (28.57%) were in their third year, and 15 (11.90%) were in their fourth year. Only five respondents (3.17%) were in their fifth year.

Students were asked if they are attending the postsecondary institution on a study permit. This question ascertained whether respondents are domestic or international students. One hundred and fourteen respondents (86.76%) were domestic students and the remaining eleven (8.66%) were international students. Two respondents declined to answer. I used this wording to capture only students on a study permit as international students, and to exclude students who may identify as an international student but have permanent residency or refugee status. This wording is becoming more common in Student Services at the postsecondary institution where the research was conducted.

Respondents were also asked if they are currently on the Dean's List, also commonly referred to as First Class Standing. This question was asked to establish the students' academic standing. First Class Standing varies between each of the three faculties included in the project. At minimum, it is determined based on a grade point average of 3.5 or above while enrolled in 24 credits during the Fall and Winter terms. Sixteen respondents (12.40%) indicated they were on the Dean's List. Whereas 106 respondents (82.17%) were not on the Dean's List.

Students were also asked about their work situation during university. Table 4.2 provides information on the respondents work situations.

Table 4.2

Students Current Work Situation

	N	Percent
I work during the academic year and summer.	42	32.56%
I only work during the academic year.	2	1.55%
I only work during the summer.	70	54.26%
I am not working, during the academic year or summer, while attending university.	14	10.85%
Other	1	0.78%

Note. Other response was self-employed.

Analysis of the survey data focused on students' awareness of their skill development and self-efficacy statements (relating to RQ1 and RQ2: What are undergraduate students', in non-professional faculties, perspectives on employability skill development in their course work? What, if any, influence does the identification of employability skills in courses have on undergraduate students' self-efficacy?)

The students were asked to indicate their level of agreement to a series of statements on a six point Likert-type scale, from strongly disagree to strongly agree. Based on my review of the literature, my experience in the Career Development field, and the interviews with the faculty members, I selected 14 of the 27 statements for statistical analysis. Statistical analysis was not conducted on all of the statements in order to avoid type one and type two errors. Table 4.3 provides the response rates for the 14 questions included in statistical analysis. The mildly and moderately responses have been combined. Descriptive statistics, mean, standard deviation, and variation, are included in table 4.4.

Table 4.3

Level of Agreement to Self-Efficacy and Employability Statements

	Strongly Disagree		Moderately and Mildly Disagree		Mildly and Moderately Agree		Strongly Agree	
	percent	N	percent	N	percent	N	percent	N
My grades are reflective of the amount of work I put into my studies.	0.78%	1	8.60%	11	69.53%	89	21.09%	27
I've developed new skills through higher education.	1.56%	2	2.34%	3	51.56%	66	44.53%	57
Chance is influential in what I achieve in employment.	4.72%	6	34.65%	44	51.97%	66	8.66%	11
An individual can't change their intelligence by much.	22.05 %	28	60.63%	77	15.75%	20	1.57%	2
I know what skills I have developed through my academic program.	1.57%	2	14.96%	19	67.71%	86	15.75%	20
I feel confident in my academic work.	0.78%	1	14.06%	18	67.19%	86	17.97%	23
I know what general skills employers expect of university graduates.	3.91%	5	28.91%	37	59.38%	76	7.81%	10
Through my academic program, I have enhanced my employability skills.	0.78%	1	7.81%	10	71.88%	92	19.53%	25
I expect that I will secure a job that requires a degree when I finish my degree.	0.78%	1	11.72%	15	55.47%	71	32.03%	41
I have developed employability skills in this course.	0.78%	1	8.60%	11	73.44%	94	17.19%	22
As a result of this course, I am more aware of the employability skills I have.	1.59%	2	26.19%	33	66.67%	84	5.56%	7
As a result of this course, I am more aware of the employability skills I need to work on.	0.78%	1	32.04%	41	60.15%	77	7.03%	9
I expect the U of A to support the development of my employability.	0.79%	1	11.81%	15	48.82%	62	38.58%	49
My employability matters a great deal to me.	0.79%	1	0.00%	0	29.37%	37	69.84%	88

Table 4.4

Survey Descriptive Statistics

	Mean	*Std. Deviation*	*Variance*
My grades are reflective of the amount of work I put into my studies.	4.78	1.027	1.054
I developed new skills through higher education.	5.21	.953	.908
Chance is influential in what I achieve in employment.	3.72	1.356	1.840
An individual can't change their intelligence by much.	2.41	1.243	1.545
I know what skills I have developed through my academic program.	4.54	1.060	1.123
I feel confident in my academic work.	4.52	1.101	1.212
I know what general skills employers expect of university graduates.	3.96	1.245	1.550
Through my academic program, I have enhanced my employability skills.	4.55	.995	.989
I expect that I will secure a job that requires a degree when I finish my degree.	4.70	1.161	1.347
I have developed employability skills in this course.	4.56	.994	.988
As a result of this course, I am more aware of the employability skills I have.	3.94	1.030	1.061
As a result of this course, I am more aware of the employability skills I need to work on.	3.91	1.080	1.166
I expect the U of A to support the development of my employability.	4.85	1.196	1.430
My employability matters a great deal to me.	5.61	.712	.507

In addition to descriptive statistics, t-test of equal variance and ANOVA were conducted to determine significance between subjects. T-tests were conducted for the following categories: gender, student status (domestic and international students), and academic standing (Dean's List). ANOVA was conducted for categories with two or more options: year of study, faculty, and work situation. Results were considered significant at α .05 level. The f statistic indicates there is greater variance between opinions and accounts for the degree of freedom as well.

Table 4.5

Test of Between Subject Effects: Gender

	df	*F*	*p*
My grades are reflective of the amount of work I put into my studies.	42.410	9.159	0.003*
I developed new skills through higher education.	123	1.893	.171
Chance is influential in what I achieve in employment.	122	.443	.507
An individual can't change their intelligence by much.	41.195	22.021	.000*
I know what skills I have developed through my academic program.	43.969	4.447	0.37
I feel confident in my academic work.	123	.069	.793
I know what general skills employers expect of university graduates.	123	2.252	.136
Through my academic program, I have enhanced my employability skills.	123	.796	.374
I expect that I will secure a job that requires a degree when I finish my degree.	123	0.45	.833
I have developed employability skills in this course.	123	.485	.487
As a result of this course, I am more aware of the employability skills I have.	121	.008	.929
As a result of this course, I am more aware of the employability skills I need to work on.	123	.123	.727
I expect the U of A to support the development of my employability.	122	.062	.804
My employability matters a great deal to me.	37.800	5.416	.022

*significant at 0.05

Table 4.6

Test of Between Subject Effects: Student Status (Domestic or International)

	df	*F*	*p*
My grades are reflective of the amount of work I put into my studies.	10.686	7.927	0.006
I developed new skills through higher education.	122	3.265	.073
Chance is influential in what I achieve in employment.	121	.734	.393
An individual can't change their intelligence by much.	10.924	4.834	.030
I know what skills I have developed through my academic program.	121	1.225	.271
I feel confident in my academic work.	122	.486	.487

I know what general skills employers expect of university graduates.	122	2.709	.102
Through my academic program, I have enhanced my employability skills.	10.870	3.915	.050*
I expect that I will secure a job that requires a degree when I finish my degree.	122	.200	.656
I have developed employability skills in this course.	122	2.943	.089
As a result of this course, I am more aware of the employability skills I have.	120	1.497	.224
As a result of this course, I am more aware of the employability skills I need to work on.	122	.373	.543
I expect the U of A to support the development of my employability.	122	2.644	.106
My employability matters a great deal to me.	10.289	13.615	.000*

*significant at 0.05

Table 4.7

Test of Between Subject Effects: Academic Standing (Dean's List)

	df	*F*	*p*
My grades are reflective of the amount of work I put into my studies.	119	.958	.330
I developed new skills through higher education.	119	1.092	.298
Chance is influential in what I achieve in employment.	118	.000	.991
An individual can't change their intelligence by much.	118	.177	.675
I know what skills I have developed through my academic program.	118	.001	.975
I feel confident in my academic work.	119	1.131	.290
I know what general skills employers expect of university graduates.	119	.100	.752
Through my academic program, I have enhanced my employability skills.	119	.256	.614
I expect that I will secure a job that requires a degree when I finish my degree.	119	1.106	.295
I have developed employability skills in this course.	119	.941	.334
As a result of this course, I am more aware of the employability skills I have.	117	.003	.958
As a result of this course, I am more aware of the employability skills I need to work on.	119	.002	.966

I expect the U of A to support the development of my employability.	25.163	5.068	.026*
My employability matters a great deal to me.	117	1.604	.208

*significant at 0.05

Table 4.8

Test of Between Subject Effects: Year of Study

	df	*Mean*	*F*	*p*
My grades are reflective of the amount of work I put into my studies.	4	.766	.709	.587
I developed new skills through higher education.	4	1.469	1.640	.169
Chance is influential in what I achieve in employment.	4	4.975	2.930	.024*
An individual can't change their intelligence by much.	4	.728	.469	.758
I know what skills I have developed through my academic program.	4	2.284	2.064	.090
I feel confident in my academic work.	4	1.989	1.668	.162
I know what general skills employers expect of university graduates.	4	1.045	.669	.614
Through my academic program, I have enhanced my employability skills.	4	1.962	2.046	.092
I expect that I will secure a job that requires a degree when I finish my degree.	4	.307	.220	.927
I have developed employability skills in this course.	4	2.207	2.322	.061
As a result of this course, I am more aware of the employability skills I have.	4	1.988	1.962	.105
As a result of this course, I am more aware of the employability skills I need to work on.	4	.416	.355	.840
I expect the U of A to support the development of my employability.	4	1.927	1.357	.253
My employability matters a great deal to me.	4	.208	.396	.811

*significant at 0.05

The ANOVA test for faculty was calculated for the top three selected categories: Agriculture, Life and Environmental Science, Arts, and Sciences.

Table 4.9

Test of Between Subject Effects: Faculty

	df	*Mean*	*F*	*p*
My grades are reflective of the amount of work I put into my studies.	2	.905	.809	.448
I developed new skills through higher education.	2	2.562	2.817	.064
Chance is influential in what I achieve in employment.	2	8.490	4.899	.009*
An individual can't change their intelligence by much.	2	3.003	1.991	.141
I know what skills I have developed through my academic program.	2	.976	.837	.436
I feel confident in my academic work.	2	7.571	6.691	.002*
I know what general skills employers expect of university graduates.	2	1.687	1.072	.346
Through my academic program, I have enhanced my employability skills.	2	.027	.025	.975
I expect that I will secure a job that requires a degree when I finish my degree.	2	.387	.284	.753
I have developed employability skills in this course.	2	4.110	4.367	.015*
As a result of this course, I am more aware of the employability skills I have.	2	5.273	5.212	.007
As a result of this course, I am more aware of the employability skills I need to work on.	2	2.205	1.877	.158
I expect the U of A to support the development of my employability.	2	.120	.079	.924
My employability matters a great deal to me.	2	.128	.244	.784

*significant at 0.05

The ANOVA test for work situation was calculated for the top three selected categories: I work during the academic year and summer; I only work during the summer; I am not working, during the academic year or summer, while attending university.

Table 4.10

Students Current Work Situation Test of Between Subject Effects: Work Situation

	df	*Mean*	*F*	*p*
My grades are reflective of the amount of work I put into my studies.	2	3.248	3.142	.047*
I developed new skills through higher education.	2	1.207	1.327	.269

Chance is influential in what I achieve in employment.	2	6.544	3.807	.025*
An individual can't change their intelligence by much.	2	3.830	2.637	.076
I know what skills I have developed through my academic program.	2	.955	.843	.433
I feel confident in my academic work.	2	.471	.382	.683
I know what general skills employers expect of university graduates.	2	4.241	2.777	.066
Through my academic program, I have enhanced my employability skills.	2	3.924	4.093	.019*
I expect that I will secure a job that requires a degree when I finish my degree.	2	.282	.205	.815
I have developed employability skills in this course.	2	5.135	5.470	.005*
As a result of this course, I am more aware of the employability skills I have.	2	3.324	3.167	.046
As a result of this course, I am more aware of the employability skills I need to work on.	2	1.002	.853	.428
I expect the U of A to support the development of my employability.	2	.667	.458	.634
My employability matters a great deal to me.	2	1.764	3.542	.032*

*significant at 0.05

Importance of employability.

Students were asked if their employability matters a great deal to them. The majority (*N* = 88, 69.84%) strongly agreed with this statement. The majority also agreed that they expect the University of Alberta to support the development of their employability (strongly agreed *N* = 49, 38.58%, mildly and moderately agree *N* = 62, 48.82%). The strongly agree response rate was similar for students across the three primary faculties of study represented in the data.

To the statement 'My employability matters a great deal to me', there are significant differences in the responses between gender (p = .022), student status (p. = .000) and work situation (p. = .032). Between gender, female respondents agreed more strongly to the statement than male respondents. The respective weighted averages for female and male respondents were 5.67 and 5.50. Domestic students agreed more strongly with the statement than international

students. The respective weighted averages were 5.66 and 5.09. Employability also matters a great deal to respondents who work while attending university. For respondents who work only during the summer and for those who work both during the academic year and summer the weighted averages were respectively 5.69 and 5.63. The level of agreement dropped to a weighted average of 5.14 for respondents who are not working while attending university.

Students who are on the dean's list, which demonstrates high academic standing, agreed more that they expect the University of Alberta to support the development of their employability skills, than students with lower academic standing. The responses from students with higher academic standing have a weighted average of 5.00, whereas this average is 4.80 for those with lower academic standing. However, there were only 16 respondents who indicated they are on the dean's list.

Awareness of employability skills.

The majority of students agreed that they enhanced their employability skills in their academic program (N = 117, 91.41%), and have developed employability skills through this course (N = 116, 90.63%). The majority also agreed that they know what skills they have developed through their academic program (N = 106, 83.46%). However, fewer agreed that they are aware of the skills they have (N = 91, 72.23%) and the skills they need to work on (N = 86, 67.18%). These responses were similar across faculty of study, although students in the agriculture program indicated a higher awareness. This indicates an awareness of skill development, but less awareness, or even language around, the actual skills.

Responses to the statement 'through my academic program, I have enhanced by employability skills' varied by student status (p = .050) and work situation (p = .019). Domestic students agreed more with this statement than international students. The weighted averages

were respectively 4.63 and 3.82. Students who work also agreed more with the statement than those who do not. The weighted averages for work situation are: 4.67 for students who only work in the summer, 4.62 for students who work during the academic year and summer, and 3.86 for students who do not work.

Awareness of developing employability skills in the course also varied by work situation ($p = .005$), as well as by faculty ($p = .015$). Students who work agreed more that they have developed employability skills in this course, than students who do not work. The weighted averages for students who only work in the summer, and those who work in both the academic year and summer are respectively 4.72 and 4.55. Whereas, the weighted average for students who do not work is 3.79. Students in the Faculty of Agricultural, Life, and Environmental Sciences agreed more with this statement, than students in the Faculties of Arts and Science. The weighted averages were respectively 4.76, 4.11, and 3.50.

Skill awareness, as a result of this course, also varied by work situation ($p = .046$) and faculty ($p = .007$). Students who only work in the summer and those in the Faculty of Agricultural, Life, and Environmental Sciences agreed more with the statement 'as a result of this course, I am more aware of employability skills I have'. The respective weighted averages were 4.12 and 4.19. For work situation, the weighted averages decreased to 3.83 for students who work in the academic year and summer, and to 3.38 for those who do not work. The weighted averages for students in the Faculties of Arts and Sciences were 3.67 and 3.50 respectively.

The variances to the above mentioned statements suggest that work situation, student status, and area of study have an influence on awareness of employability skill development.

Self-efficacy.

Several questions aimed to assess the students' self-efficacy in relation to their academic work. The majority of respondents agreed that their grades are reflective of the amount of work they put into their studies (N = 116, 90.62%). This highlights a high degree of self-efficacy, as the amount of effort put into a task can affect the outcome. Furthermore, the majority of students disagreed that an individual cannot change their intelligence by much (N = 105, 82.68%). This indicates that the students do not view intelligence as a fixed trait, rather a trait that can be changed through effort.

However, the results also indicate variances between responses. Responses to the statement 'my grades are reflective of the amount of work I put into my studies' varied by student status (p = .006), gender (p = .003), and work situation (p = .047). Domestic students agreed more with this statement than international students. The respective weighted averages were 4.83 and 4.27. Female students also agreed more with the statement than male students and this response rate was statistically significant. The weighted average was 4.80 for females and 4.73 for males. Students who work during the academic year and summer agree more with the statement, compared to students who only work in the summer and students who are not working. The weighted averages for work situation were respectively 5.00, 4.78 and 4.21.

There was a also a significant variance between the responses to the statement 'an individual can't change their intelligence by much'. These responses also varied by student status (p = .030) and gender (p = .000). Female (WA = 2.27) and domestic students (WA = 2.32) disagreed with this statement significantly more than male (WA = 2.79) and international students (3.27).

There was also a significant difference between faculty of study to the statement 'I feel confident in my academic work' ($p = .002$). Students in the Faculty of Science agreed more with this statement than students in the Faculties of Arts, and Agricultural, Life, and Environmental Sciences.

Although the responses provide insight into the students' perceived self-efficacy about their academic work, they do not answer RQ2 (What, if any, influence does the identification of employability skills in courses have on undergraduate students' self-efficacy?).

Employment expectations.

The majority of students also agreed that they expect to secure a job that requires a degree when they finish their degree ($N = 112$, 87.5%). Although the students seem confident and hopeful in their employment prospects, they also recognize external factors, notably chance, will play a role in their future employment. The majority agreed that chance is influential in what they achieve in employment ($N = 77$, 60.63%). These responses provide insight to the students' self-efficacy about their employability. Students also indicated they are, at least somewhat, aware of the skills employers expect of university graduates ($N = 86$, 67.19%).

Students were also asked the extent to which they agree with the statement 'chance is influential in what I achieve in employment'. Seventy-seven students, 60.63%, agreed with this statement, and 50, 39.37%, disagreed with it. Significant variances were found between year of study ($p = .024$), faculty ($p = .009$), and work situation ($p = .025$). Students in their third and fourth years of study agreed more with the statement than those in their first and second year. Students who are not working while attending university also agreed more with the statement, compared to students who are working. Students in the Faculty of Arts agreed more with the

statement than students in the Faculties of Agricultural, Life, and Environmental Sciences and Science.

Open-Ended Questions

The survey also included three open-ended questions. Students were asked: what is your perspective on your own employability?; In what ways has your university education enhanced your own employability?; Please provide any suggestions for how employability skills can be further integrated into your undergraduate program course work. The open-ended questions received 101, 104, and 86 responses respectively. The students' responses were analyzed thematically. The responses provide further insight to their perspectives on employability. From their responses, I identified the following key themes: self-efficacy, the role of higher education in employability, skill enhancement, real-world focus, employer expectations, and career education.

Self-efficacy.

Self-efficacy is the belief in one's capacities to perform a task or attain a specific goal. In regard to employability, self-efficacy is related to one's belief in their ability to obtain and maintain employment. When asked for their perspectives on their employability, many of the students' comments reflect their self-efficacy. I categorized these comments as high self-efficacy and low self-efficacy. Some students seemed confident that they will find work when they complete their studies. Others also seemed confident, but recognized they still need to enhance their skills and experience. Whereas, some students' responses did not suggest they are confident about finding employment after graduation.

High self-efficacy.

In the context of employability, high self-efficacy involves positive beliefs in one's ability to secure a job and develop a career following graduation. One student's comment suggested that his or her employability correlates to his or her education: "I believe that the knowledge I have gained from the u of a and through nait have significantly increased my employability. I think I am very employable." Other comments echoed this sentiment: "I believe that through my dedication to my academic career as well as life experiences I have gained both in and outside of classrooms makes me fairly employable in today's market." Whereas other comments attributed employability to more personal attributes, which highlight that employability is developed through multiple avenues. "Finding and keeping work has never been an issue. I'm willing to work hard and learn new things, that has always been an asset." Another student stated: "I believe that for jobs within my interest, I am a strong candidate. I am hard working, dedicated and will make sure my possible employers know this when I am searching for a job." These students demonstrated high self-efficacy in their abilities to find work.

Although some students expressed optimism about their employability, their comments also suggest an awareness of challenges in the job market. One student explained: "I believe my degree will help me obtain a job, however, it is difficult to get program-related job experience as a student." Another student expressed that they have "some strong employability skills that would benefit me when trying to apply for jobs", but also recognized these skills need to be further developed in order to stand out to employers.

The following comment stood out to me as it highlights this student's ambivalence: "I find it harder to judge my employability skills, but would like to think I would be competitive in

the job market." The comment suggests the student believes he or she is employable, while also expressing uncertainty about employability skills.

Fifty-four students provided comments that reflect a high degree of self-efficacy about their employability. The majority of students whose responses demonstrated high self-efficacy were in the Faculty of Agricultural, Life and Environmental Sciences ($N = 36$, 66.67%). Six students (11.11%) were in the Faculty of Arts and ten (18.52%) were in the Faculty of Science. This suggests a possible relationship between area of study and self-efficacy beliefs, although the sample size is too small to confidently predict this relationship. These students were also in earlier years of their academic programs, 20 (37.04%) in second year and 17 (31.48%) in third year. Notably, all the students who demonstrated strong self-efficacy beliefs about their employability were working at some point during their studies.

Low self-efficacy.

I also identified comments that represent low self-efficacy beliefs about employability. One student described their perspective on their employability as "not ideal - not sure what kind of place would hire me." Another student's comment suggests uncertainty about their employability: "I really do not know much about how employable I am. I think that arts give you some good soft skills, but I don't think they are unique." These comments highlight a degree of precariousness about employability from some students.

For other students, their low self-efficacy relates to competition in the job market. One student explained: "Despite my own abilities and degree I feel although my employability will be low since many people have bachelors." This sentiment was repeated by another student: "So many people with science degrees and arts degrees that you're just another with one of them when you're applying to jobs. Or employers don't really care that you have an undergraduate

degree in arts or sciences." The following comment highlights the context specific nature of self-efficacy; the student demonstrated low self-efficacy in their ability to find work in their chosen field:

> I think I am employable but not necessarily in the field I want to be in. I know that in order to be employed in what I am getting a degree in (political science) will require getting a master's degree or going to law school. This is simply the result of the job field and lack of jobs for recent graduates than it is a result of my own employability. Having just an undergraduate degree doesn't make you competitive in the job field any more.

Low self-efficacy may also relate to limited experience. One student explained that he or she does not "have much experience to show employers that I have the skills they are looking for." Other comments highlight that some students recognize they are developing employability skills, yet they feel their limited experience will still hold them back. A student explained: "I think I have a good work ethic and the capabilities to succeed in a workplace, however because of my age and experience level I am unsure that I would be labeled employable when I graduate."

Thirty-five students provided comments that reflect low self-efficacy about their employability. The majority (N = 23, 67.65%) were also studying in the Faculty of Agricultural, Life and Environmental Sciences. Several of these students were in the upper years of their degrees (third year $N = 3$, 8.57%, fourth year $N = 2$, 5.71%). The majority of these students also worked at some point during their degree ($N = 30$, 85.72%). However, five (14.29%) of these students were not working while in university.

The role of higher education in employability.

Students were asked how their university education has enhanced their own employability. The responses from this question highlighted the diversity in students' perspectives about the role of higher education. For some students, higher education did not play a role in employability, whereas other students indicated that their education has played a role. One student explained employability as more of a personal responsibility, than something they expected from higher education:

> While the University … does provide supportive services in increasing our chances of employability. It is ultimately our own skills and motivation that will determine whether or not we will be employable upon or shortly after graduating. For example, networking and "inside" connections seem critical for just a entry level position.

Another student expressed that he or she "didn't come to university for employability skills. "I came for knowledge that would help me and speed my learning curve in Agriculture. Things like work ethic, teamwork, leadership, humility and communication I learned elsewhere, in the real world."

Other comments suggest that some students recognized the role higher education has played in developing their employability. "It is paramount that my employability is maximized in and during university, a process which myself and the university play a part in doing." This sentiment was echoed by another student: "It [university education] has taught me skills that I can use towards a future career." Another student expressed that higher education will help him or her to advance their career. "It [university education] has prepared me to go to graduate school, which will hopefully open up more avenues to employment."

These responses highlight that students do not all share the same expectations about the role higher education will play in their employability.

Skill enhancement.

Many students described the skills they have learned thus far in their academic program and how this skill development relates to their employability. “I’ve learned many new skills. It has taught me leadership and teamwork skills as well as public speaking skills. This makes me more confident in approaching future employers and colleagues.” Another student identified the value of their skill development: “My field is very specialized and learning the skills that I’ve acquired through school is fundamental in making me an appealing prospective employee.” Certain course components may also contribute more to skill development than others. “Classes with lab work have given me hands on experience with what I’ll be doing in the workplace and believe classes with labs greatly increase my employability.”

In addition to the skills they’ve developed, other students recognized they need to keep working in certain areas. “It is important in securing a future job; I have both strengths and weaknesses pertaining to my employability skills and I hope to develop these skills in order to reduce my weaknesses.” “I know I have skills and knowledge in areas, but I know I am lacking in some areas too.”

Real-world focus.

Students were asked for suggestions on how employability skills could be further integrated into their course work. Many students commented that they would like to see more practical, or real-world, applications of their work. “I think that learning more real-world job duties would be extremely helpful so that you know what you will be doing generally when you get a job in your field.” Another student suggested more hands-on experience: “One thing that

could help would be more opportunities were individuals can go to get more hands-on experience rather than just textbook and talking."

Students may also not know how to transfer what they are learning to other contexts. "I think that sometimes in these undergrad arts classes it is not always clear how one would apply the skills they learn to a job. It was more explicit in this course, so a focus on highlighting employability skills may be helpful." The previous comment suggests that identifying the skills practiced in a course may help students to identify their skills and translate what they are learning to different contexts.

Employer expectations.

The students' comments indicate that many were unsure what employers look for when hiring. "I have no idea if my skills make me competitive in an employer's eyes. I also am not sure what employers looks for when they hire individuals fresh out of school." Several students also suggested bringing employers into courses to discuss what they do and what they look for in future employees. Of the three courses involved in this project, one has strong industry connections. These students had the opportunity to engage with employers in this industry.

Several students also suggested faculty members should "teach what employers are looking for in certain fields" or "could indicate what material will be important in the future with certain jobs." These comments relate to industry and employer involvement in higher education and suggest some students want more opportunities to learn about employer expectations and hiring practices. Another student expressed: "I would like to see actual industry examples or even industry consultation on a given skill much more often. University tends towards a research-minded teaching model, whereas most undergraduates work towards industry positions."

Forty-seven students provided comments about relating to employer expectations and providing more practical applications of course work. The majority of these students are in the Faculty of Agricultural, Life and Environmental Sciences ($N = 33$, 73.33%). Very few of these comments were from students studying in the Faculty of Arts ($N = 2$, 4.44%). Notably, the majority of the students who provided these comments are working at some point while in university ($N = 46$, 97.88%).

Career education.

Some students commented that they need more support related to career education. Career education includes learning about what they can do with their degree, work search strategies and support, mock interviews, skills translation, events with employers and other opportunities to network, and work experience opportunities. A student expressed: "I would love more diverse opportunities for experience whether that be through volunteering, networking, or working in general." Other students explained that they want "more discussion of potential careers that are available for each program after graduation, and the best ways to go about getting jobs." Three students also suggested offering a course that would address career education: "allow an OPTIONAL course that can be taken for credit, which will support skills (interviews, cover letters, resume, internship, etc.)."

Although career education services are available to students at the University of Alberta, these comments suggest students may be looking for career support within their courses and from faculty members. At the time of the project, internship programs were available to students in the three main faculties represented.

Interview 2

The faculty members each participated in a second interview at the end of the term. The purpose of this interview was to ask them if, and how, their perspectives on employability changed, and to discuss key aspects of the students' survey results. In addition to the questions from the first interview, the faculty members were asked about students' awareness of employability skills and who is responsible for employability skill development.

Definitions of employability.

The faculty members' definitions about employability skills remained consistent between the interviews. However, their perspectives in the second interview expanded to capture experience and technical skills. Whereas their initial definitions focused on demonstrating a specific skill set to secure employment, the definitions at the end of the term expanded on what this skill set needs to include. "We're looking at things like communication, basic numeracy and literacy sorts of skills, ability to frame problems, a bunch that they label as personal management skills. Looking over those you could actually say that you could group those together as being a responsible adult or sentient being (Participant A)." This expanded definition is possibly the result of a new vocabulary; the employability skills inventory prompted the faculty members to reframe their teaching materials to consider students' skill development.

In the second interview, their perspectives on employability also expanded to consider students' futures beyond just getting a job. Participant A touched on the "ability to function competently in a workplace". This expanded the definition from getting a job, to also maintaining and succeeding in a job. For participant C, employability involves a "career type position", where students want to be in the long-term. In this sense, employability involves not only securing work, but flourishing in this work.

Career exploration.

Faculty members can help students learn about their career options or gain hands-on experience in their field. Participant C described how his course, and notably the experiential learning opportunities (labs, farm visits), helped students learn more about their career interests.

> Other students, their vision is to get to vet school and that takes a bit longer. And we have some students who the lights got turned on in this class. There are three or four of them who said 'I think I wanted to be a vet, and now I want to work in agriculture'.

Through this course, students were exposed to career options outside what they were previously considering. These students could begin to learn about what work would be like in a different area of this industry and what skills they would need to work in this area. Participant A suggested internships as a way to support students and a "good way to improve their employability".

Students in participant B's discipline have a wide variety of career options; their degree does not point to a specific career or lead down a linear career path. For these students, they must consider a variety of options. Often, they seek out support for exploring their options from their faculty members, such as B. "I am faced with helping students think about their future as workers and they sit in this office and I need to have the skills to talk to them about the skills they have that can get them employment."

Changes.

The project did not prompt significant changes for the faculty members perspectives about employability, or their teaching, rather it nudged them towards considering the non-technical skills students develop in their courses. When asked how his perspective on employability changed over the term, participant A explained:

> It has a little bit, and I think it's mostly because of talking with you and also looking over the handout that you had given the class. It kind of fleshed out more what I had been putting in the soft skills bucket. It made it a little more specific and a little more, a few more dimensions than I had really been thinking about.

For participant C, the project demonstrated the value of developing non-technical skills, in particular, common sense and communications. The project also encouraged these faculty members to be more explicit with their students about what they are learning and practicing in their courses. Participant A suggested adding "maybe another bullet point in the intended outcomes of a lab."

Participant B felt her perspective on employability did not change over the semester. She had anticipated that the skills inventory would push her to consider, even in minimal ways, employability in her course. She recognized she has become more aware of employability:

> I think that as a result of you talking to me a couple of times, coming to class, giving me something to put up on [Moodle] about your project, I've begun to think a little more about employability. But just in loose ways.

Despite her initial interests, she was unable to devote much thought to employability over the course of the term. As discussed in the first interviews, the faculty felt they had limited time to address all the necessary academic content in their courses. Consequently, discussions about employability, as participant B mused, became "one of the things that feel off the table". It is important to note that the faculty members were not expected to discuss, or even refer to, the skills inventory with their students. Participant B suggested she would ideally spend a brief amount of time discussing skill awareness and translation with students:

> In a perfect world, I think that I would spend a bit of time at the end of each class, like in May or December, to talk a little bit about how what we've done in the classroom could translate into something we might call employability. I would like to do that, but I mean maybe what I do is find somebody, like yourself, to come and give a 15-minute thing at the end of every fourth year class. Just to give students skills, or give them the translation capacity.

Addressing employability does not require significant changes to curriculum or teaching practices. As the participants described, it can include adding skills or intended outcomes to assignments or labs or discussing with students how a skill might help them in future work. Participant B anticipated more faculty members would be interested in employability, particularly if it does not require them to change their teaching by much.

> I think also probably a lot of faculty would be interested in thinking about employability, just broadly, and the chart that you gave me at the beginning of the semester I had never seen anything like that. It was really, really helpful.

Skill awareness.

In the survey, many students strongly agreed that they have developed new skills though higher education. However, fewer students agreed that they know what skills they have developed. I discussed these responses with the faculty members during the second interview.

The faculty members agree that students do develop employability skills in their courses. However, they also agree that students' awareness of this development is limited. "I think that they've been told all along that they need to go to university so that they can get skills, or that they can be in a position to be employed. But I think you're right, I don't think they know. I don't tell them" (Participant B). Students' limited awareness may result from not thinking about

what they're learning as skill development and not recognizing that their academic work may have value to an employer. Participant A described students' misguided awareness as aspirational that they are getting more out of their studies than just academic knowledge:

> They would like to think they are developing skills, that's why they're here and suffering through 4 years, or five years, or six years of this. They hope they'll get something out of it. That really speaks to why they can't identify the skills they're learning. Part of it is they're not thinking of the subject or the content material that they are learning, or that they're learning to do, as really part of that target skill set. And I don't think they are, again because we haven't really been framing things in that fashion.

Awareness may also result from taking the time to think about skill development, to reflect on what is going on. "Sometimes I think students, if they are totally passive, they won't stop to think if they will use it or not. They will just write it down, memorize it, and go through the assignments and exam. That's it (Participant C)." Participant B described the students who will be better off as the "ones who pay attention at a meta level to what's going on." If faculty members are more aware of employability skills, they are better able to "remind students what they're getting out the course, besides the academic content (Participant A)". Participant A expressed: "We've never really thought about it being necessary to communicate that."

Responsibility.

Faculty members, and by extension higher education, are responsible for the academic development of students. However, where the responsibility for employability development falls is less clear. "I would like to think we could all agree that at the end of the day, the academic side of the employability question is our responsibility. Where people will diverge is to what extent our academic program will help students mature in terms of the other side, the soft skills

side (Participant A).” The faculty members expressed diverging opinions about this issue, possibly due to differences in their academic disciplines. Participant A and B both highlighted that students cannot, and should not, rely on them to develop their employability. Participant A literally chuckled:

> Well I think the fact that they are telling you that their university isn’t taking any, or much, responsibility is a very realistic perspective that they should have. They look at their professors and think, ‘my god, if I have to depend on them to get a job, I’m hooped.’

For participant B, developing and enhancing students’ employability simply falls outside of the scope of her role in higher education:

> I don’t think it’s my responsibility. I think it would be a good thing for me to do to help them translate it. I’m here as an intellectual and an administrator of intellectual programs. I can’t do that. Maybe if there are an extra three days a week.

From these perspectives, students need to own their responsibility and not expect their faculty members will enhance their employability.

Participant C’s perspective differed, and he expressed that he probably has “a bit more empathy for students being employed than do some other people.” He equated this empathy with the applied nature of his academic studies and his current teaching. His discipline is targeted towards a very specific industry, and his course incorporates opportunities for the students to engage with this industry. The other courses did not involve industry engagement.

Summary

In this chapter, I presented the results of my data analysis. The results were presented in in the order of data collection. In the first interview, faculty members addressed their perspective on employability, the importance of employability, skills awareness, curriculum and teaching,

and career exploration for students. Their perspective of employability narrowly focused on getting a job. For two of the three faculty members employability was not a focus in their teaching, however they all recognize its importance to students and the value in helping students develop their employability. These two faculty members were also less aware of the employability skills developed in their courses. The skills inventories highlighted that many employability skills are practiced through academic course work. The course in the applied sciences, taught by faculty member C, included more skills than the other courses.

I also found that employability matters a great deal to students and that they expect their degree programs to support the development of their employability skills. Although students agreed that they know what skills they have developed through their academic program, fewer are aware of which specific skills they have and which ones they need to work on. These results varied significantly by student status, work situation, and area of study. Several survey questions assessed students' perceived self-efficacy in relation to their academic work and suggest that many students feel their efforts have an effect on their academic results. The majority of the students also expect to find a job that requires a degree when they graduate, which highlights a high degree of self-efficacy about their future employment prospects. However, the results did not answer RQ 2 (What, if any, influence does the identification of employability skills in courses have on undergraduate students' self-efficacy?). The results provide insight into students' perspectives about employability and self-efficacy, but do not explain why they feel this way.

Through open ended questions, students elaborated more about their perspectives on their employability, some expressed high self-efficacy about finding future work, whereas others seem less optimistic. The students also provided suggestions about how their institution could further

support their employability. Many suggested more practical experiences and teaching that are consistent with what employers are looking for from their employees.

At the end of the project, faculty members had expanded their perspective on employability and identified small changes they could make to help students identify their employability skills. However, the participants did not all agree that they can be responsible for students' employability development. Participant C accepted more responsibility for this, whereas participants A and B did not feel students can rely on them to help develop their employability skills.

In the next chapter, I discuss the results in relation to employability and self-efficacy literature. I will also merge the qualitative and quantitative results to explore how students' and faculty members' perspectives on employability align with one another, which will address RQ4. This following chapter also includes project limitations and areas for future research.

Chapter 5: Discussion

Overview

The following discussion examines both the qualitative and quantitative results from this project. In this chapter, the findings are discussed in relation to literature in this area and qualitative and quantitative findings are merged. Merging and integrating the different data sets are key components of mixed methods research (Creswell & Plano Clark, 2018). This project allows for comparison between faculty member and students' perspectives about employability. The qualitative and quantitative findings, from faculty members and students, highlight that employability is important in higher education, yet both groups need support to develop their awareness of employability skill development in academic work.

This chapter is organized thematically. I examine the students' and the faculty members' perspectives about the role and importance of employability in higher education. Although opinions vary on the importance of employability, both groups' awareness of employability skills are lacking. I also discuss opportunities to address employability in higher education, and what challenges these present. I explore how the results provide any further connection between employability and self-efficacy. This chapter also includes practical implications and limitations of this research project, followed by recommendations for future research.

Importance of Employability

Employability does not have a clear, agreed upon role in higher education. This is, in part, because the purpose (inclusive of aims and objectives) of higher education is contested. Teichlier (2015) describes four main functions of higher education: intellectual enhancement, cultural enhancement, preparation for the world of work, and critical thinking. As such, employability development in higher education can play a crucial role in preparation for the

world of work. But it can also be perceived as a threat to academic freedom and capitulation to neoliberalism. Star and Hammer (2008) argue that this is a false dichotomy; employability and intellectual pursuits do not need to be mutually exclusive.

Importance to faculty members.

The faculty members included in this project did not share the same perspective on employability with each other. For participant C, who teaches in an applied discipline in the natural sciences, employability is important and a focus of his teaching. His teaching helps prepare students for the world of work. However, participants A and B are less focused on employability. They both recognize that employability is likely important to students, but employability played little role in their teaching. Participant A described the importance of employability on a continuum, from not at all to very important. Participant B considered employability to be "part of the sales pitch" of higher education. Their opinions support Teichler's view about multiple purposes of higher education. These results highlight that the importance of employability varies between faculty members and by discipline, which may further suggest that faculty members have different views on the function of higher education.

There is growing rhetoric that higher education is crucial to the knowledge-based economy to prepare students for the world of work (Molla & Cuthbert, 2015; Knight & Yorke, 2002; Yorke, 2004). All of the faculty members addressed that their students will eventually move into the world of work. However, they did not agree on who is responsible for preparing them for that transition. Participants A and B argued students' employability development falls outside the scope of their responsibility. Whereas participant C accepts some of this responsibility and addresses employability in his teaching. This diversity of opinion highlights

that leaders at higher education institutions, governments, and students cannot assume that faculty members will address employability in their teaching.

Importance to students.

Research and discussions about employability in higher education have focused on employers' perspectives, and their role and purpose. Student perspectives have largely been overlooked in the employability discourse (Tymon, 2013). The students surveyed in this project clearly indicated that their employability matters a great deal to them. The majority also agreed that they expect their institution to play a role in their employability development. These results align with the Canadian University Survey Consortium (2016) surveys that highlight that students' primary motivations for attending university are career related.

Merging faculty members' and students' perspectives.

There is a mismatch between students and faculty members perspectives about the importance of employability. Employability matters a great deal to the majority of students surveyed (agreed $N = 37$, 29.37%; strongly agreed $N = 88$, 69.84%). The majority also expects the University of Alberta to support the development of their employability (agreed $N = 62$, 48.82%; strongly agreed $N = 49$, 38.58%). Although the faculty members recognized the importance of employability to students, it is not the focus of each of their teaching. This mismatch suggests that students and faculty members' expectations about employability development do not align. Students expect to develop employability skills in their academic courses, whereas faculty members may not even consider addressing it. However, as participant B expressed "most of us have had a few crap jobs when we were students and then moved into this environment, which is very specific and it's not like other jobs". Consequently, faculty members cannot be expected to teach about employability without appropriate awareness of

employability, interest in helping their students develop it, and support from those with employability expertise.

Awareness of Employability

Addressing employability skills developed in courses helped provide both faculty members and students with a vocabulary about employability. Employability on its own is a rather ambiguous term and can be understood in different ways. At a basic level, employability can be interpreted as the ability to secure work (Fenesi & Sana, 2015). In the initial interview, the faculty members described employability as getting a job and the skills that will help in this. By the second interview, their definitions broadened to include functioning well in a job and pursuing a career. Their expanded understanding of employability aligns with those of researchers, including Dacre Pool and Sewell (2007) and Yorke (2006), who address the knowledge, skills and personal attributes that influence employability. Employability is more than just getting a job; it includes maintaining and succeeding in a job. It seems reasonable to conclude that by introducing an employability skills inventory in their courses, the faculty members who participated in this study learned more about employability throughout the term. In turn, this may have helped them develop a broader understanding and awareness about employability.

Students indicated that they enhanced their employability skills through their course work and academic program. However, fewer agreed that they are aware of the skills they have and the skills they need to work on. This inconsistency could result from limited awareness or language about specific skills or may suggest that students were hopeful that they developed something through their education but do not know exactly what skills they have developed. As the saying goes: *You don't know what you don't know*. These results are similar to what Jackson (2012)

found when students were asked to self-report their skill levels. Students reported themselves to be reasonably capable, but gave themselves lower scores on critical thinking and self-awareness (Jackson). Jackson's results, as well as the results in this study, may also relate to employers' perspectives about a skills mismatch. New graduates claim they can do something, but in reality, do not meet employers' expectations (Moore & Morton, 2017). However, is this the fault of students or employers? Can we expect that students can learn independently how to identify their skills, translate, and apply them to a different setting? Tymon (2013) and Jackson both recommend telling students explicitly what skills employers want and encouraging students to reflect on this skill development. I provided the students in this project with a list of the employability skills they could develop in their courses. The students' awareness of developing employability skills may have been the result of this list. However, in this project students were not encouraged to reflect on their skill development nor were they assessed on their employability skills. Skill reflection was not a focus of this study as I only aimed to address their perspectives on employability and how this relates to their self-efficacy, or their perceived ability.

The students' awareness of skill development also varied by work situation and faculty of study. Students who worked at some point while studying demonstrated a greater awareness of employability development than students who were not working while attending university. This highlights that work experience has an influencing role in employability awareness. Students in Faculty member C's course (a more applied course than Faculty members A and B) also demonstrated a higher awareness of employability development, than students in the natural and social sciences. Both of these results reinforce that students cannot be treated as a monolith;

their awareness about employability will vary based on their work experience, area of study, and possibly other factors.

The results from both students and faculty members highlight that both groups need support in identifying and assessing what skills are developed in their academic courses. Neither groups can be presumed to simply know. This presumption leaves an unfair burden on both groups. Furthermore, if we continue to not discuss employability development, we continue to support employers' argument that students are not prepared for the world of work.

Employability Development

Both faculty members and students suggested ways to address employability in higher education. Faculty member B discussed how skill awareness is possibly a translation issue. From her perspective, students may not recognize how to translate, or transfer, the skills learned in her classes, such as reading Chaucer, to a workplace setting. She argued the skills required to read complex texts in her course could be applied to reading and analyzing a policy document. Brown (2015) argues faculty can help students recognize the importance of soft skill development, and that they should lead conversations and discussions about this. However, both faculty members A and B emphasized that students should not rely on them for employability development. They both recognized the value and importance of addressing employability in their courses, but they cannot address everything. They explained that this is due to several reasons: lack of time in their courses, minimal connections to industry and awareness of what employers want, and that their teaching focuses on academic content. For faculty who teach in applied disciplines, including participant C, it is likely simpler to connect academic content to industry. For faculty teaching in the pure sciences and humanities, which are arguably less applied, this connection is more tenuous.

Students addressed several ways that employability skills can be further integrated into their course work. They suggested having a 'real-world focus', more practical applications, and more hands-on learning opportunities. Students also wanted to know what employers expect and what they are looking for from university graduates, as well as what career opportunities are available to them. Several students suggested bringing employers into the classroom. Others suggested teaching what employers are looking for, or providing industry specific examples. This presents a challenge for faculty members. In this project, faculty member C has close connections with industry and A has some connections and is aware of the field most students in his program will enter. However, for the third faculty member (B) her students do not have a clear career path. Rather they have many options available for them, including professional programs, graduate school, and working in non-profits. So how does she address what employers are looking for? These results highlight that faculty members do not have consistent knowledge or expertise in teaching about employability. Brown (2015) suggests that faculty can help students recognize the importance of soft skill development and can include learning opportunities that encourage career exploration and relate to future work, such as professional writing. This requires faculty members to be aware of the soft skills practiced in their courses, to be familiar with the career options for their students, and to know what employers expect of graduates. It is likely unreasonable to expect faculty members to have the time, resources, motivation, and expertise to independently address employability in their courses. Rather, faculty need to be provided with support, such as including a skills inventory. As seen through the challenges in recruiting faculty members for the project, many will have no interest in including employability in their courses. Employability initiatives therefore should focus on the faculty

members who are interested and willing to be involved. It needs to be a bottom-up approach, rather than top-down.

Responsibility for employability development.

Although the students suggested ways to further incorporate employability into their courses, they did not claim that this is solely the responsibility of their professors. Employability development cannot be the responsibility of only students, or only faculty members. Rather, support needs to be offered at an institutional level and employers need to be prepared to be involved. This is already happening through experiential learning opportunities, notably work experience programs. Industries are very specialized and are constantly changing, which creates challenges for training students for specific jobs and fields (Moore & Morton, 2017). It is essential that employers recognize that higher education will not, and cannot, do all of their training. Higher education can support students by helping them identify their employability skills and how these translate to different contexts. Employability development needs to involve efforts at the institutional level, including student services and work experience programs, faculty members, employers, and students. This will likely need to look different for each institution, and possibly within programs at institutions. At the University of Alberta, where this research took place and where I work in career services, it needs to be a collaborative process with faculty members. Career services has connections to industry and employers, and can collaborate with faculty members to support students' employability development.

Supporting faculty members.

If universities lean into preparing students for the world of work, faculty members will need to be provided with support to contribute to this agenda. My results highlight that not all faculty have the knowledge or experience to independently address employability in their

courses. They also recognized that addressing employability does not require significant changes to their curriculum or a lot of time. I took on some of the work and responsibility for these faculty members by deciding what employability skills framework to use and identifying the skills practiced in their courses. Collaborating with an external expert in employability and career development also saves time and energy for the faculty members; they do not need to become experts in these areas. Brown (2015) encourages faculty members to embed employability in their teaching and claims this should not take significant time or effort for faculty. Embedding employability skills did not take a significant amount of time for the faculty members in this project. However, they did not feel that this led to any changes in their teaching over the course of the term. Rather it helped them become more aware of the non-academic skills students can develop in their classes. It is important to note that this project did not aim to change the faculty members teaching; rather, the research questions explored faculty members and students' perspectives about employability development in academic courses.

Self-Efficacy

I aimed to answer what influence identifying employability skills in a course has on undergraduate students' self-efficacy (RQ2). This project explored student employability through the theoretical framework of self-efficacy. Self-efficacy is one's beliefs in their ability to perform a task or attain a specific goal (Bandura, 1997). Self-efficacy is relevant to career interests as it influences what careers we will consider attainable (Bandura). Yorke and Knight (2007) emphasize that personal qualities play a significant role in employability. Self-efficacy can play a mediating role between ability and performance. Mastery of a skill will not guarantee strong performance in the workplace; rather one's perceived ability to perform a skill will influence

their performance (Jackson, 2012). Self-efficacy is not a measure of actual ability, rather one's beliefs about what one can do in a specific situation.

Several questions in the student survey addressed self-efficacy. The survey questions were adapted from the employability questionnaire developed by Yorke and Knight (2007). These questions aimed to gain insight into students' self-efficacy related to employability, rather than assessing their level of self-efficacy or their actual skill level (see Appendix D, questions ten to thirteen). Self-efficacy is a personal quality and highly context specific, as such we cannot make claims that someone either is, or is not, self-efficacious. Rather, we can gain insights into their self-efficacy beliefs in a specific context, such as their perspectives on their employability.

The majority of students agreed (N = 89, 69.53%) and strongly agreed (N = 27, 21.09%) that their grades are reflective of the amount of work put into their studies. This suggests that the students recognize that they can affect their performance. Furthermore, the majority of students disagreed (N = 77, 60.63%; strongly disagreed N = 28, 22.05%) that an individual cannot change their individual intelligence by much, which indicates that the students believe they can influence their intelligence, suggesting that students have positive self-efficacy beliefs about their intelligence. Gbadamosi et al. (2015) found that students with a fixed mindset, or beliefs that intelligence cannot be changed, were less likely to work-part time and more likely to have lower career aspirations. My findings suggest that the majority of the students have a growth mindset, or believe that their intelligence can be improved.

I also asked students if they expect to find a job that requires a degree when they finish their studies. The majority agreed (N = 71, 55.47%) and strongly agreed (N = 41, 32.03%) with this statement. This suggests strong self-efficacy beliefs about future employment prospects. This is notable as self-efficacy can affect motivation, which in turn impacts what we take on or

shy away from in certain contexts. These findings suggest that students have strong self-efficacy beliefs in their abilities to secure work following graduation. Self-efficacy theory suggests that the students in this study would not shy away from applying for jobs that require a degree (Bandura, 1997; Reddan, 2015). This is, after all, what we would hope for from university graduates.

While many of the students who participated in this study have positive self-efficacy beliefs with respect to their intelligence and employability, on a somewhat contradictory note, the majority of students also agreed (N = 66, 51.97%) and strongly agreed (N = 11, 8.66%) that chance is influential in what they will achieve in employment. These findings highlight an awareness of external factors that can influence their employability. External factors, such as a sluggish economy, could prevent students from finding work immediately after graduation. If we looked solely at their employment rates, we could assume that these students are not very employable, that their education did not help them to find work. Rather, we need to consider the contextual factors and chance elements that will influence the students' ability to secure employment. It is also important to restate that employability is the ability to obtain and maintain employment; it is not measured through employment numbers. For example, unemployment does not, inherently, mean one's employability is low.

Although the majority of the students agreed (N = 94, 73.44%) and strongly agreed (N = 22, 17.19%) that they developed employability skills in these three courses, fewer agreed (N = 84, 66.67%) and strongly agreed (N = 7, 5.56%) that they are aware of the employability skills they have. Fewer also agreed (N = 77, 60.15%) and strongly agreed (N = 9, 7.03%) that they are aware of the skills they need to work on. These responses suggest that the students may generally recognize what skills are learnt in their courses, but may be less aware of their skill ability.

Unfortunately, this question does not ascertain how capable the students perceive themselves to be. We only know that, to varying extents, they feel they have developed employability skills, and not whether they feel confident in performing these skills. Consequently, the results do not answer RQ2. I cannot confidently state what influence identifying employability skills in courses has on undergraduate students' self-efficacy. Nor can I ascertain the relationship between identifying employability skills in a course and self-efficacy. A student may have developed employability skills through their course work, but self-efficacy theory asserts that students need to be aware of this development.

Yorke (2004) theorizes that individuals with low self-efficacy need to be given explicit feedback. Awareness of one's abilities is therefore critical in enhancing self-efficacy. However, my results suggest that telling students what employability skills they are developing may not be enough for them to know what they can do and what they need to work on. Rather, the survey data indicate it helps them to recognize that they are developing employability skills. This recognition, however, does not appear to automatically follow that students are aware of the 'specific' skills they have, or need to work on.

Self-efficacy was a common theme in the students' open-ended responses. Students provided comments on their perceived ability to obtain employment upon completing their studies, and perspectives on future job prospects. Certain comments by students indicated high self-efficacy related to their employability, explaining that they feel confident in finding work after graduation. Other comments expressed concern and hesitation about their employability, indicating lower self-efficacy. These results highlight the individual nature of self-efficacy, and perceived employability. Although many students responded to the survey questions in ways that

support strong self-efficacious beliefs about their employability, many comments reinforce that they do not all perceive themselves to be employable.

Although my results do not clearly tell us if, or how, identifying the employability skills developed in a course affects students' self-efficacy, there are teaching strategies that can help increase students' self-efficacy. Bandura (1997) argues that we can create learning experiences that intentionally increase students' self-efficacy. These experiences are: performance accomplishments, vicarious learning or modeling, verbal persuasion, and situations with low levels of anxiety related to the behavior.

Skills Inventories

I used the Conference Board of Canada's (n.d.) Employability Skills listing for this project. There are many skills and competency frameworks related to employability. Tymon (2013) compared six frameworks and found they had communication, teamwork, and interpersonal skills in common. There is a risk, however, that if the frameworks do not provide a description of the skills, they may not be understood in the same way. The Conference Board of Canada's framework is useful because it breaks skills down into tangible actions. For example, communication consists of five subskills, including "read and understand information presented in a variety of forms (e.g., words, graphs, charts, diagrams)" (Conference Board of Canada). It is important to recognize that identifying a course's employability skills should not be a measure of the quality of the course, nor a competition between courses. The employability skills inventory is meant to capture what faculty members are doing in their courses, and possibly serve as a tool for them to consider how to integrate other skills. As I have worked on this project, I have grown concerned that the skills inventories could be used to assess courses and evaluate their relevance to employers. If a course is deemed to not enhance students' employability skills, does it risk

being cut? Does this initiative provide employers with more influence in higher education to dictate what skills need to be developed? Will faculty members be encouraged to focus their teaching on these skills to the detriment of their academic content? These questions worry me and I feel it is crucial to emphasize that there needs to be a balanced approach to employability development in higher education. Higher education can serve multiple purposes, from intellectual enhancement to preparation for the world of work. These purposes also are not inherently contradictory or mutually exclusive; faculty members can address employability without ignoring academic content.

Practical Implications

A uniform approach will not address employability development for all students (Pegg, et al., 2012). Structural, program, and curricular changes, along with extra-curricular opportunities, can help students develop their employability (Artess et al., 2017). The results from this project demonstrate that although employability is not addressed by all faculty members, they can be encouraged to incorporate it into their courses with adequate support. Initiatives to enhance employability in higher education need to focus on the faculty members who are willing to discuss and consider ways to incorporate employability into their teaching. These faculty members must be provided with support as they cannot be expected to know how their course work relates to employability. Career services are likely best suited to provide this support. The students involved in this project care about their employability and expect to develop it through their education. By ignoring students' perspectives about employability skills, we are not doing our best to prepare them for their future work. Furthermore, if students' expectations about higher education are not met, we also risk perpetuating the stereotype that certain degrees are less 'valuable'.

This research provides additional insights about students' perspectives on employability research that have largely been missing. The data indicate that identifying the employability skills practiced in a course is beneficial to many students, but this does not mean that all students are aware of their specific skill abilities and where they can improve. As such, it is insufficient to only tell students what employability skills they are developing in their courses. Rather, the data from this study indicate that students should also be encouraged to reflect on these skills and consider how they are applicable to different contexts.

Career Integrated Learning at the University of Alberta.

This research project served as a pilot for the development of a Career Integrated Learning program at the University of Alberta. Memorial University's Career Integrated Learning program served as a model for the design of this research project. I will apply this study's results to develop a Career Integrated Learning program at the University of Alberta, which will be offered by career services. The program will provide support for faculty members to address employability in their course work. Notably, the results highlight that identifying employability skills is not enough for students to be aware of the specific skills they have and those they need to further develop. As such, a reflective component will be included in the program to encourage students to analyze their employability skills. As of this writing, the program is in development and will ideally be offered starting in the fall term of 2020.

Limitations and Future Research

Sampling.

This project included only three faculty members, who all teach in non-professional faculties. Non-professional faculties include general areas of study, such as humanities, social sciences, natural sciences, that do not lead to a specific profession, such as nursing, education, or

pharmacy. Recruiting faculty members for this project was challenging, which suggests there could be little interest in involving employability into course work. I had a prior relationship with each of the faculty members who participated in the project, two through my professional role in career services, and the third through a previous academic project. Our prior relationship likely influenced the faculty members to participate in the project. Furthermore, they may have had a prior interest in supporting the career interests of their students. Their results, as such, may not be representative of faculty members in higher education.

Although more students participated in the project, the results cannot be generalized beyond this sample. Rather, the results provide insight into a specific audience at the University of Alberta. These results are useful within the context of the University of Alberta, which is a large, research intensive university, to guide employability development programs. Further research on employability development in higher education can explore employability initiatives in professional fields.

Self-efficacy: theoretical framework.

While self-efficacy theory suggests that students need to be aware of their capabilities, it is also the case that students need to believe they are capable of successfully executing a task or achieving a goal. It is one thing to be aware that a skill has been developed, but does this mean that students can feel they are good at it? Specifically, will the students in this project be able to confidently explain their employability skills to a future employer? Do they believe that they can demonstrate the employability skills developed in their courses to a future employer? Further research is needed to explore the relationship between self-efficacy and employability.

The findings in this study suggest that there is a connection between self-efficacy and employability. They do not clearly answer what affect employability skill identification has on

students' self-efficacy. The results also do not clarify the relationship between employability and self-efficacy. Further research is needed to explore this relationship in greater detail. For example, a future project could assess students' self-efficacy about their employability at the start and the end of an academic term, while also identifying the employability skills practiced in the course. This design could provide a baseline for the students' employability and assess changes over the course of the term. However, it would be impossible to control for external factors, such as part-time work and extracurricular activities that would likely influences the students' self-efficacy.

It is important to reiterate that self-efficacy is context specific, individual, and cannot be generalized. My results also cannot be generalized beyond this group of students, nor was this the purpose of the project. Yorke and Knight's (2007) employability questionnaires are meant to prompt students to reflect on their employability, and should not be used for summative assessment or generalizations. Rather, data collected through these tools should be used at the local level to guide employability programs.

Encouraging reflection on employability skills.

Students surveyed in this project were less aware of the employability skills they have and the employability skills they need to work on. These students, however, were not encouraged to analyze their skill levels. Future initiatives to support students' employability development may benefit from incorporating a reflective component. A reflective component would encourage students to analyze where they are doing well and where, as well as how, they could improve. Additional research is also needed to assess the effect of reflective components on students' self-efficacy about their employability.

Research methods.

Survey methods provide specific answers to specific questions. However, this method does not answer why respondents answered questions in a certain way. In this project, I do not know why employability is important to these students, nor what has influenced their awareness of employability. I used a mixed methods convergent design, where both data sets are collected concurrently, and mostly separately. A mixed methods sequential design, where the collection and analysis of the first data set will influence the collection and analysis of the second data set, addresses this limitation by following up a survey with the collection of qualitative data. The qualitative research design, including research questions, are developed based on the responses gather in the initial quantitative section. A qualitative method, such as interviews or focus groups, could provide further insight into why students value employability and why their awareness of their own employability skills is somewhat limited.

Conclusion

This mixed methods study aimed to explore student and faculty member perspectives about employability skill development in higher education. Employability is an individual's ability to obtain and maintain employment, and employability skills are the skills that enhance employability. Employability's role in higher education is contested, yet it is, nevertheless, expected that universities will help prepare students for future work (Brown, 2015; Molla & Cuthbert, 2015; Star & Hammer, 2008, Tymon, 2013). I choose to focus this study on students' perspectives about employability as their perspective was largely missing from research in this area. As the project focused on identifying the employability skills practiced in academic course work, it was essential to involve faculty members and learn more about their perspective on employability.

The outcomes of this study highlight that employability skills were important to the participating students and to some degree they expect their programs of study to at least help them develop these skills. The responsibility for employability skill development cannot fall solely to one group. On this point, Pegg et al. (2012) argues that a uniform approach will not work as employability is too complex. Students, faculty members, career services, and employers must all be involved in employability development. There are multiple ways students can enhance their employability, such as through work experience, and experiential learning opportunities. Many Canadian universities also offer experiential learning and work experience programs where students can apply what they are learning outside of the classroom. The model for my project, based on Memorial University's Career Integrate Learning, is a valuable opportunity to support faculty members to address employability in their course work. By working with faculty members to identify the employability skills developed in their curriculum, we can help them learn more about employability, and also help students enhance their awareness of their employability skills. Career Services can support faculty members, providing expertise on employability and career education. Faculty members need not do this alone; Career services must provide leadership and support to ensure employability development is addressed in higher education. The responsibility does not lie with one group, rather employability development must be a collaborative effort in higher education.

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Appendix A

Participant Information Letter and Consent Form

Student Perceptions of Employability Skills in General Programs
Faculty Member – Information Sheet
Fall Term 2017/ Winter Term 2018

Investigators

Emily Gregory, Masters Candidate, Educational Policy Studies

- [Researcher email]

Dr. Heather Kanuka, Professor, Educational Policy Studies

- [Supervisor email]

Purpose

The purpose of this project is to develop further insight into undergraduate student perspectives about employability skills, with a focus on the skills developed through curricular activities. The project will examine what effect identifying employability skills practiced in a course has on students' and faculty members' awareness of employability.

Employability involves skills, knowledge and attributes that make an individual more likely to gain and maintain employment in their chosen field. Employability skills are the skills that contribute to obtaining and maintaining work.

Students perspectives about employability skills are largely overlooked in the research in this area. By better understanding students' perspectives on employability skills, the academic community and career services will be better able to design and implement programs targeted at developing these skills.

Methods

The research design of this project is divided into three phases. In the first phase, purposive sampling will be used to select up to three to five faculty members from general program faculties, who are teaching a 200, 300, or 400 level undergraduate course in the fall term of 2017 or the winter term of 2018. In collaboration with the investigators, employability skills will be added to your course syllabi. This project does not involve any course redesign or major rewrites to your syllabus. You will also be asked to provide your perspectives on the role and value of employability in higher education.

In the second phase of the research project, I will observe the classroom to look for ways employability skills may or may not be addressed in the teaching and course activities. I will

observe up to five classes. We will collaborate to determine which classes will be observed. I will be observing the following in your class:

1. The instructor's teaching,
2. Student-instructor interactions,
3. Student engagement and participation (e.g., questions, discussions, class activities, etc.)

The data I am collected through the observations will be in the form of hand written notes.

The next step of the project will be to assess students' perspectives on their skill development. Students registered in your course included in the project will be invited to participate in the research project. Using a survey, students will also be asked to share their perspectives about developing employability skills through the course. The survey will be optional and anonymous. You will participate in a second interview at the end of the course to discuss the project.

Participation Criteria:

- You must teach either a 200, 300, or 400 level undergraduate course in either the Fall term of 2017 or the Winter term of 2018. The course must be in a general program faculty (e.g., Arts, Sciences, Agricultural, Life and Environmental Sciences).
- Preference will be given to courses where targeted enrollment is greater than 20 students.
- Ideally the you will have previously taught the course so that you are familiar with the curriculum.
- Willingness to participate in the research project, which involves:
    - Participating in at least two semi-structured interviews. Interviews will be audio recorded. You will have the opportunity to review the transcription of the interview and make amendments to your comments.
    - Provide the principal investigator, Emily, with the syllabus for the course included in the project.
    - Including the identified employability skills in the course syllabi. It is at your discretion where the employability skills will be listed.
    - Discussing the identified employability skills with the student in the course.
    - Allocating class time for the research to provide a brief presentation about employability skills and the research project.
    - Allow the principal investigator, Emily, to observe up to five classes.
    - Providing class time where the surveys can be completed. The researcher will facilitate survey distribution during the class time. The survey will be delivered during week eleven of the course; the specific time is at the discretion of the faculty member.

Consent

Participation in this research project is completely voluntary.

Confidentiality

- Your participation is optional and results will be confidential.
- All collected information will be recorded and stored in a manner that maintains your confidentiality.
- Any identifying information collected through the interviews will be restricted and removed when reporting the data.
- Only members of the project team will have access to the interview data.
- Participants will not be identified in the dissemination of this research.

Benefits

Participation in this study will add to the body of research on employability in higher education. Currently there is little research on student perspectives about employability. This research project also serves as a pilot to assess the feasibility of expanding an employability skills initiative at the University of Alberta.

You can also request an aggregate report of the results from your class. The report will not be provided to you until after course grades have been finalized and approved.

Risks

Participation will not pose any harm to you, or to students, who participate in the project.

Study Withdrawal

You are free to remove your consent and end your participation at any time, up until data analysis begins. Data analysis will begin on April 30, 2018.

Information Use

The information collected from your participation will be used in the investigators, Emily Gregory, master's thesis project. The aggregate information may also be published in academic journals and presented at conferences associated with university teaching and career development.

The aggregate information will also inform the development of an employability skills program at the University of Alberta Career Centre.

Data collected in this project may be used in future research. If this is done, it will need to be approved by a research ethics board.

Approvals

The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

If you have any further questions regarding this study, please do not hesitate to contact Emily Gregory [researcher email] or Dr. Heather Kanuka [supervisor email].

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and will receive a copy of this consent form. I will receive a copy of this consent form after I sign it.

_____	_____
Participant's Name (printed) and Signature	Date
_____	_____
Name (printed) and Signature of Person Obtaining Consent	Date

Appendix B

Interview Guide 1

Student Perceptions of Employability Skills in General Programs

Faculty Member Interview 1

Fall Term 2017/ Winter Term 2018

In advance of the interview, the faculty member must send me the syllabus for the course being included in the project.

The information letter for faculty members will also be reviewed and signed in advance of the interview.

Introduction

- The purpose of this interview is to collect faculty member perspectives about employability skill development and to review the employability skills practiced in their course.
- Informed consent:
    - Participation is voluntary
    - Information provided in the interview is confidential and any identifying information will be removed.
    - The interview is audio recorded. A transcript of the interview will be provided to you after the interview. Amendments to the interview can be made at this time.
- The interview is semi-structured.
- The employability skills discussed for your course must be listed in your course syllabus by the start of the term. It is at your discretion where you choose to list them. For example, the skills can be included next to course assignments or as an appendix.

Questions:

1. Please tell me about your perspective on employability:
    a. What is your understanding of the term employability?
    b. To what extent do you think employability matters in higher education?
    c. To what extent do you think students develop employability skills through their academic course work?
        i. If students are developing these skills, to what extent are they aware of this development?
2. In what ways do you currently address employability in your courses and work with students?

Review of employability skills identified for selected course:

The employability skills listing developed for this course, were identified using the Conference Board of Canada Employability Skills 2000+ standard and relevant disciplinary-specific skills standard (if available).

1. Are the skills appropriate for the course activities?
2. Are any skills missing?
3. Where will you include the skills in your syllabus?

Interview wrap-up:

- Request copy of finalized syllabus, with employability skills.
- Confirm the employability skills will be included in the syllabus and mentioned when the syllabus is reviewed with students.
- Schedule time during the first weeks of the term for a brief presentation about the project.
- Schedule time during the eleventh week of the term for survey delivery in class.

Appendix C

In-Class Presentation Guide

Key points:

- Name
- Graduate student (masters) in Educational Policy Studies
- I also work full-time at the University of Alberta Career Centre, where I work on projects to help students gain experience outside of the classroom.
- I'm interested in learning about students' perspectives on employability skill development.
- Employability is defined as the skills, knowledge and attributes that make an individual more likely to gain and maintain employment in their chosen field.
- Employability skills include discipline-specific and generic skills, as well as the skills needed for self-management and career development.
- The project is looking at what affect identifying employability skills in a course has on students' and faculty members' awareness of employability.
- Student perspectives about employability skills are largely overlooked in this area of research. A better understanding of your perspectives, will help the academic community and career services to design and implement programs.
- I'm working with several courses this semester.

Project Overview:

- As a result of participating in this course, you may develop or enhance the following employability skills.
    - Note: This is not a guarantee that you'll develop these skills. It's your responsibility to consider if and how you are developing this skills.
- The Conference Board of Canada's Employability Skills inventory was used to analyse the course. For more information about this inventory, please visit: http://www.conferenceboard.ca/spse/employability-skills.aspx
- The Conference Board of Canada divides these skills into three categories: fundamental skills, personal management skills, and teamwork skills.
- I encourage you to spend some time reviewing this list and considering how you may be able to work on these skills over the course of the semester.

Next steps:

- I'll be back around the 3rd week of March to ask you to fill out a survey on this topic.
    - Please note this project has been reviewed and approved by a research ethics board at the U of A. We'll review this in more detail when I'm back.
- I may also be observing the class at certain times, which will be arranged with your professor.
- If you have any questions about the project, please do not hesitate to contact me (email is listed on ES sheet).

Appendix D

Survey Informed Consent and Questions

Student Perceptions of Employability Skills in General Programs
Student Survey
Fall Term 2017/ Winter Term 2018

Investigators
Emily Gregory, Masters Candidate, Educational Policy Studies
- [Researcher email]

Dr. Heather Kanuka, Professor, Educational Policy Studies
- [Supervisor email]

Purpose
The purpose of this project is to develop further insight into undergraduate student perspectives about employability skills, with a focus on the skills developed through curricular activities. The project will examine what effect identifying employability skills practiced in a course has on students' and faculty members' awareness of employability.

Employability involves skills, knowledge and attributes that make an individual more likely to gain and maintain employment in their chosen field. Employability skills are the skills that contribute to obtaining and maintaining work.

Please note that this project does not aim to assess students' skill levels; rather the project is investigating students' perspectives about employability skills. Students perspectives about employability skills are largely overlooked in the research in this area. By better understanding students' perspectives on employability skills, the academic community and career services will be better able to design and implement programs targeted at developing these skills.

Methods
You are being asked to participate in this research project by completing a short survey. The survey will be conducted online in week eleven of the course. The survey should take no longer than 10 minutes to complete.

Your instructor for this course is also participating in this research project. In collaboration with your instructor, employability skills were added to the course syllabus. Your instructor is participating in two interviews for the project where they will be asked their perspective on employability.

Consent

Participation in this research project is completely voluntary.

Consent is implied. This means that by submitting the survey you agree to participate. While completing the survey, you are free to skip any questions you prefer not to answer.

Confidentiality

- Your participation is optional and your results are anonymous.
- You will not be asked to share your name, contact information or student ID in the survey.
- Your course instructor will not know if you participated or not.
- Your decision on whether or not to participate in the survey will not affect your course grade or your ability to access any University of Alberta programs or services.
- All collected information will be recorded and stored in a manner that maintains your confidentiality.
- Any identifying information collected through the survey will be restricted and removed when reporting the data.
- Your instructor may request a report of the data from their course. The data from all the respondents in the course will be compiled into an aggregate report. The report will not be shared with your instructor until after course grades are finalized and approved.

Benefits

Participation in this study will add to the body of research on employability in higher education. Currently there is little research on student perspectives about employability. Your participation may also help you reflect on which skills you are developing through your course work.

Risks

These surveys will not pose any harm to you. Your decision on whether or not to participate will not affect your grades or ability to access any [institution name] programs or services.

Study Withdrawal

Participation is voluntary and you can stop the survey before submitting your results. However, after responding to the survey you will not be able to withdraw your answers. This is because no unique identifying information will be collected that would allow the researchers to identify and remove your responses.

Information Use

The information collected from your participation will be used in the investigators, Emily Gregory, master's thesis project. The aggregate information may also be published in academic journals and presented at conferences associated with university teaching and career development.

The aggregate information will also inform the development of an employability skills program at the [institution name] Career Centre.
Data collected in this project may be used in future research. If this is done, it will need to be approved by a research ethics board.

Approvals
The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

If you have any further questions regarding this study, please do not hesitate to contact Emily Gregory [researcher email] or Dr. Heather Kanuka [supervisor email].

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and have received a copy of the information letter.

Please indicate if you agree to participate in this survey.
I agree
I disagree

[Start Survey]

[All respondents]

1. Please select your faculty/School:
    a. Agricultural, Life and Environmental Sciences
    b. Arts
    c. Augustana
    d. Business
    e. Campus Saint-Jean
    f. Education
    g. Engineering
    h. Law
    i. Library and Information Studies
    j. Medicine and Dentistry
    k. Native Studies
    l. Nursing
    m. Pharmacy
    n. Physical Education and Recreation

o. Public Health
p. Rehabilitation Medicine
q. Science

2. Are you at the U of A on a study permit?
    a. Yes
    b. No
    c. Prefer not to answer

3. What is your current year of study?
    a. 1
    b. 2
    c. 3
    d. 4
    e. 5
    f. 6+

4. In which month and year do you plan on completing your current degree? (month, year) [open-ended, text-box]

5. What is your gender?
    a. Male
    b. Female
    c. Decline to answer
    d. Other (please specify)) [open-ended]

6. Are your currently on the Dean's list?
    a. Yes
    b. No
    c. Decline to answer

7. Which of the following best describes your current living situation?
    a. I live on-campus in residence.
    b. I live off-campus alone.
    c. I live off-campus with roommates.
    d. I live-off campus with family.
    e. Other (please specify) [open-ended]

8. Which of the following best describes your current work situation?
    a. I work during the academic year and summer.

b. I only work during the academic year.
c. I only work during the summer.
d. I am not working, during the academic year or summer, while attending university.
e. Other (please specify) [open-ended]

9. What is your age? Please identify your age
    a. Less than 18
    b. 18 to 24
    c. 25 to 29
    d. 30 to 34
    e. 35 to 40
    f. Greater than 40

[New page]

10. Please indicate your level of agreement with the following statements: [scale: strongly disagree, moderately disagree, mildly disagree, mildly agree, moderately agree, strongly agree]
    a. My grades are reflective of the amount of work I put into my studies.
    b. Luck doesn't play much of a role in what I achieve academically.
    c. I've developed new skills through higher education.
    d. Chance is influential in what I achieve in employment.
    e. I have little control over unexpected events.
    f. An individual can't change their intelligence by much.
    g. No matter what kind of person someone is, it is always possible for them to change significantly.

[New page]

11. Please indicate your level of agreement with the following statements: [scale: strongly disagree, moderately disagree, mildly disagree, mildly agree, moderately agree, strongly agree]
    a. What I have learned in my academic studies has helped me in the workplace.
    b. I know what skills I have developed through my academic program.
    c. I feel confident in my academic work.
    d. During my university degree, I have learned strategies that help me to solve problems.
    e. I have been encouraged to consider how my extracurricular activities can support my future employment.

[New page]

12. Please indicate your level of agreement with the following statements: [scale: strongly disagree, moderately disagree, mildly disagree, mildly agree, moderately agree, strongly agree]
    a. I know what general skills employers expect of university graduates.
    b. I know the extent to which my current capabilities fit the expectations of employers.
    c. I am able to assess how competitive I am in the labour market.
    d. Through my academic program, I have enhanced my employability skills.
    e. I can provide an employer (or another interested party) with evidence of my employability skills.
    f. I expect that I will secure a job that requires a degree when I finish my degree.

[New page]

13. Please indicate your level of agreement with the following statements: [scale: strongly disagree, moderately disagree, mildly disagree, mildly agree, moderately agree, strongly agree]
    a. I have a broad understanding of the subject area covered in this class.
    b. This course requires me to be more independent than previous courses.
    c. This course has encouraged discussion.
    d. This course has helped me to think critically about the subject.
    e. I have developed employability skills in this current course.
    f. As a result of this course, I am more aware of the employability skills I have.
    g. As a result of this course, I am more aware of the employability skills I need to work on.

[New page]

14. Please indicate your level of agreement with the following statements: [scale: Strongly agree, moderately agree, mildly agree, mildly disagree, moderately disagree, strongly disagree]
    a. I expect the [institution] to support the development of my employability.
    b. My employability matters a great deal to me.

15. What is your perspective on your own employability? [open ended]
16. In what ways has your university education enhanced your own employability. [open ended]
17. Please provide any suggestions for how employability skills can be further integrated into your undergraduate program course work? [open-ended]

Thank you for completing this survey. If you would like aggregate results to be shared with you, please provide your email address. [Link to google document] If you provide your email address, it will not be linked to your survey responses. Aggregate results will be shared once data collection is completed.

Appendix E

Interview Guide 2

Student Perceptions of Employability Skills in General Programs

Faculty Member Interview 2

Fall Term 2017/ Winter Term 2018

This interview will take place at the end of the course included in the project.

Introduction

- The purpose of this interview is to collect faculty member perspectives about employability skill development
- Informed consent:
    - Participation is voluntary
    - Information provided in the interview is confidential and any identifying information will be removed.
    - The interview is audio recorded. A transcript of the interview will be provided to you after the interview. Amendments to the interview can be made at this time.
- The interview is semi-structured.

Questions:

3. Please tell me about your perspective on employability:
    a. What is your understanding of the term employability?
    b. As a result of this semester, how has your perspective on employability changed?
    c. What role should employability play in higher education?
    d. To what extent do you think students develop employability skills through their academic course work?
        i. If students are developing these skills, to what extent are they aware of this development?
4. The survey results seem to indicate that the students recognize that they develop skills through higher education. However, fewer student agree that they know what skills they have development. What do you think about this?
5. We can probably assume from the results that students take responsibility for their employability. Where is the balance between what you do and what students do regarding employability development?
6. Will you continue to address employability in your courses?
    a. If yes, please describe how you will do this?