Faculty Conceptualizations of 'Curriculum' in Canadian Polytechnics

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Abstract

In higher education, 'curriculum' is a term that is as ambiguous in meaning as it is ubiquitous in use. However, few educational researchers have sought to trouble these differences in conceptions held by those working in higher education institutions, and even fewer have examined these differences amongst those working most closely with curriculum: the instructional faculty. This thesis examines the various conceptions held by teaching faculty, the implications of these differences, and the influence that academic background and teaching experience have on these conceptions. Applying phenomenographic methods, this study analyzed 18 interviews conducted with faculty across four polytechnic institutions in Alberta, Canada. Phenomenographic analysis of these interviews yielded a hierarchically structured and inclusive outcome space composed of five qualitatively different categories of conception. Further qualitative analysis revealed no apparent relationship between the academic background or teaching experience of individual faculty members and the degree of complexity or sophistication of the conceptions that most closely aligned with their expressed statements. An unexpected outcome was identified during analysis, as it was found that faculty statements were more complex and sophisticated when describing their teaching experiences than when making prescriptive statements about what curriculum should be. This study identifies not only the qualitatively different ways faculty conceive of curriculum, but also that they are unaware of the breadth and complexity of curriculum, as demonstrated by the simplified and limited prescriptions they express when asked directly about curriculum. Institutional curriculum language, codified through curriculum policies and processes, is proposed as the primary factor influencing faculty conceptualizations of curriculum within their instructional context. By demonstrating that faculty have varying conceptualizations and understandings of curriculum, this study highlights the need for further research in this area within other Canadian and international higher education contexts.

Dedication

This work is dedicated to the late Corrienne (Cory) Beres, EdD, who was my kindergarten teacher, mentor, colleague, and most importantly, my mother. Her immeasurable influence on my life as an educator, lifelong learner, and parent has shaped the person I am today and will continue to do so in the future.

Acknowledgements

Table of Contents

List of Tables and Figures

Tables:

Figures:

List of Abbreviations

Abbreviation	Definition
2SLGBTQA+	Two-spirit, Lesbian, Gay, Trans, Queer, Asexual, Plus
AIT	Alberta Industry and Training
CAQC	Campus Alberta Quality Council
FASS-LUMS REC	Faculty of Arts and Social Sciences and Management School Research Ethics Committee
KSAs	Knowledge, Skills, and Attitudes
OBE	Outcomes-Based Education
OECD	Organisation for Economic Co-operation and Development
PAC	Program Advisory Committee
PIDP	Provincial Instructor Diploma Program
RP	Research Participant
RQ	Research Question
SoTL	Scholarship of Teaching and Learning

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Author's Declaration

This thesis is the result of my own work and does not include the outcome of any work done in collaboration. It has not been submitted in substantially the same form for the award of a higher degree at this institution or elsewhere. To the best of my knowledge, this thesis does not contain any references to any published material that has not been duly acknowledged. Many of the ideas in this thesis are a product of discussion with my supervisor, Professor Paul Ashwin.

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Chapter 1: Introduction

1.1 Rationale for the Study

As a teaching and learning topic, curriculum is an under-researched and under-discussed area within the higher education environment (Annala et al., 2016; Ashwin et al., 2020; Barnett, 2009; Barnett & Coate, 2005; Blackmore & Kandiko, 2012; Bovill & Woolmer, 2019; Clegg, 2011; Coate, 2009; Krause, 2022; Le Grange, 2006; Lindén et al., 2017; Mäkinen & Annala, 2010; Muller & Young, 2014; Quinn, 2019; Tight, 2023). Given that it serves as the foundation for learning and teaching in higher education, the limited amount of research problematizing curriculum in higher education is concerning. Amongst the research that has been published, the majority has examined curriculum development within the specific context of a particular discipline, institution, or course of study (Annala et al., 2016; Tight, 2023).

Research related to higher education curriculum in a more general sense, as opposed to context-specific curriculum research, is largely absent (Bovill & Woolmer, 2019). This has led to the term 'curriculum' becoming ambiguous, despite its regular use in the higher education domain (Lattuca & Stark, 2009), resulting in confusion among academic staff regarding its meaning (Bovill & Woolmer, 2019).

I have encountered this lack of consensus regarding the meaning of the term in my work as an instructional designer, program designer, and educational developer at a Canadian polytechnic, where I have found that those using the term often have differing understandings of it. Whether they are staff in the registrar's office, academic leaders, marketers, administrative assistants, faculty, or hold various other institutional roles, different interpretations of the word have been voiced both among these groups and within them. This is not a uniquely Canadian occurrence. In writing about the college system in the United States, Lattuca and Stark (2009) describe how college staff, including faculty members, instructional development specialists, institutional researchers, teaching assistants, curriculum committees, deans, and academic vice

presidents, "talk about 'curriculum' with the untested assumption that they are speaking a shared language" (p. 3). More recently, this variety in interpretations of the concept of 'curriculum' has also been noted in the literature within the context of university stakeholders in Vietnam, where "the concept of curriculum is variously interpreted by different stakeholders within the university, including senior administrative staff, teaching academics and students" (Phan et al., 2016, p. 1256).

A point of greater concern, and the focus of this study, is that there has been sparse examination of faculty conceptions of curriculum, and an absence of the factors that influence these conceptions. Faculty conceptions of curriculum merit examination, as Cornbleth (1988) explains,

> *How we conceive of curriculum is important because our conceptions and ways of reasoning about curriculum reflect and shape how we think and talk about, study, and act on the education made available to students. Concern with conceptions is not "merely theoretical." Conceptions grow out of and enter into practice. (p. 87)*

Thus far, Fraser and Bosanquet (2006) have been the only researchers to apply a phenomenographic approach to investigate the variation that exists in how higher education faculty conceive curriculum. However, given that the context of Fraser and Bosanquet's (2006) research was faculty teaching in an Australian university, there is a need to examine this topic in other higher educational contexts.

1.2 Research Questions

To address the issues I have identified in the current body of literature relating to curriculum in higher education, and more specifically, to investigate how faculty conceptualize curriculum, I identified the following three research questions that served to guide my research design:

RQ 1 – How do faculty teaching in Canadian polytechnic institutions conceptualize curriculum?

RQ 2 – What relationships exist between faculty members' understandings of 'curriculum' and their academic credentials or years of teaching?

RQ 3 – Are instructional faculty's descriptive accounts of curriculum qualitatively different than their prescriptive accounts?

1.3 Research Context

1.3.1 Researcher Background

At the time of writing this thesis, I have been engaged with curriculum as an educator, in some form or another, for more than 25 years. During this time, my understanding of curriculum has shifted and evolved. This evolution occurred as I experienced curriculum in a variety of educational contexts. My introduction to the world of curriculum theory occurred while I was a student pursuing a Bachelor of Education degree with a focus on Elementary Education. The focus of this pre-service teaching education was primarily on the pedagogical practices and assessment approaches best suited to teaching the general education subjects that I would eventually be responsible for teaching. Within the courses I studied curriculum was no more than the government-mandated learning outcomes for students in kindergarten to grade 6. As my teaching career progressed, I began to be exposed to varying views on what constitutes curriculum, recognizing that it was a more complex and sophisticated topic than I had encountered in my undergraduate studies.

Motivated by this discovery of the broader field of curriculum studies, I returned to university for further study. As I completed my Master of Education in Curriculum, Teaching, and Learning, my understanding of curriculum expanded, broadening beyond government-mandated course learning outcomes to include the materials and resources used to support student achievement, as well as the explicit and implicit impacts of the learning environment I created for my students. To me curriculum became all the learning that occurred in my classroom, a view of curriculum not shared by my teaching colleagues, who maintained the same less complex view of curriculum as I had previous to my graduate studies.

With this newfound understanding of curriculum, I transitioned from teaching in the K-12 education system to working within higher education, first supporting the design and development of both courses and programs, and then as an educational developer, supporting faculty in developing their skills and knowledge as educators.

In the 14 years I have been working in higher education, regardless of my professional role, I have observed a lack of consensus among instructional faculty regarding how they understand curriculum or what curriculum is or is supposed to be. Some faculty viewed curriculum as the learning outcomes and objectives listed in the formal outlines of the courses they were assigned to teach. Some viewed it as the textbook used in the course or other learning materials. Others viewed it more broadly, including the goals of the different institutional initiatives being championed at the time. This necessitated a conversation at the start of any curriculum project or coaching to clarify that what I meant by 'curriculum' was the same way those involved understood it. It is from these experiences that I formulated my research questions.

1.3.2 Canadian Higher Education Curriculum Contexts

The term 'curriculum' has become ubiquitous in the Canadian higher education environment. It is referenced in conversations among academic leaders, staff, and faculty often in ways such as "The curriculum of this course is …" or "We need to review the quality of the curriculum in our program." or "How do I change my curriculum?", or "How is curriculum aligned with industry needs?". It is embedded with the institutional structures and systems in various staff groups such as Curriculum Controls, Curriculum Review Committees, Curriculum Administrators, and Curriculum Development Departments and specialists. Institutions have curriculum management systems that track the approvals of curriculum change and publish the curriculum in academic calendars and course outlines.

In Canadian primary and secondary education (K-12), teachers acquire an understanding of curriculum theories through their university training and professional development, as this is the conceptual knowledge base of their

profession. In Canadian higher education, unless they are teaching in the Education domain, instructors, for the most part, do not have this educational knowledge base. They possess domain-specific knowledge of their field, serving as subject matter experts (SME) in the classroom, lecture hall, or lab. However, unless they have completed additional education or professional development in the field of Education, shifting into the role of subject matter educators (SMED) where the student is the focus on their instructional practice and not solely their subject matter, they are largely unaware of curriculum theory, as they are focused on teaching (however they may conceptualize that role) the curriculum of their domain (however they conceptualize what that is). The combining of these two conceptualizations results in the enacted curriculum that the students experience.

1.3.3 Polytechnics in Alberta, Canada

Unique amongst OECD countries, Canada does not have a national body that is responsible for educational policy or oversight (Intergovernmental Affairs, 2017; Jones & Noumi, 2018; Walker, 2020). Instead, education policy is controlled by each of the ten provinces and three territories, with each being responsible for the organization, delivery, and evaluation of education within its jurisdiction (Council of Ministers of Education Canada, n.d.). Within the province of Alberta, responsibilities for education are divided between two ministerial departments: the Ministry of Education, which has oversight for early childhood services, primary education, and secondary education, and the Ministry of Advanced Education, which oversees all post-secondary education (Government of Alberta, 2020). It is important to note that within the Canadian educational context, the terms 'post-secondary education', 'tertiary education', and 'higher education' are used synonymously (Jones & Noumi, 2018).

The post-secondary sector in Alberta falls under the jurisdiction of the provincial *Post-Secondary Learning Act* (2003). Under this Act, the 26 publicly funded post-secondary institutions in the province are organized in a 'six sector model' consisting of comprehensive academic and research universities, comprehensive community colleges, undergraduate universities, polytechnic institutions, specialized arts and cultural institutions, and independent academic

institutions (Government of Alberta, 2009, 2025). Polytechnics in Alberta occupy a unique space within this model, providing education that is neither purely vocational nor university-based. These institutions offer a wide range of programming at the undergraduate level and below. The programs offered include skilled trades apprenticeships, certificates and diplomas in skilled trades and technical fields, as well as bachelor's degrees. Due to this diversity of the programming offered, the faculty teaching at these institutions have a wide variety of educational backgrounds and academic credentials. These credentials range from having journeyperson certification in a skilled trade to technical diplomas, bachelor's degrees, master's degrees, and doctorates. Additionally, faculty at polytechnics are generally hired directly from the industries associated with the credential they will ultimately be teaching, and as such, rarely have experience working with curriculum, other than as students themselves.

1.4 Research Approach

As my research questions centre around how faculty conceptualize curriculum within the context of Alberta polytechnic institutions, my research design was based on a phenomenographic approach. Phenomenography provides a theoretical lens, as well as qualitative research methodologies, that allowed me to analyze faculty members' accounts of their experiences related to curriculum in their instructional context. The use of phenomenography in the design of my research allowed me to identify a finite range of ways in which faculty experience curriculum. Using semi-structured interviews, I was able to draw on the research participants' accounts of their experiences with curriculum. From which I was able to extract their descriptions, gathering them together to form a collective pool of potential conceptions of curriculum. Through an iterative analysis process, I developed a hierarchical and inclusive outcome space comprising five qualitatively different ways that faculty conceptualize curriculum. Using these categories, I was able to compare the participants' academic backgrounds and teaching experience to determine if there was a relationship between these factors and the complexity of their conceptions of curriculum. I was also able to compare the prescriptive and descriptive accounts of

curriculum made by participants to identify if the complexity of these accounts differed.

1.5 Contribution To the Body of Literature

As I stated earlier in this chapter, there is a lack of research concerning curriculum in higher education, with most studies focusing on subject-specific curriculum areas. As a general concept, 'curriculum' has seen very little research, which has contributed to the term developing an ambiguous meaning within higher education. Very few researchers have problematized the issue of how faculty, who act at the intersection between students and the knowledge they seek to gain, conceptualize the term 'curriculum'. To date, only a single study has used phenomenography to identify the variation in how higher education faculty conceptualize curriculum. Fraser and Bosanquet's (2006) research, conducted over 16 years ago was limited to faculty teaching at a single Australian university. As such, my study constitutes an original contribution to the body of literature by providing a more current view of conceptions of curriculum held by instructional faculty, as well as expanding the types of faculty examined by exploring a higher educational context that has yet to be examined, polytechnic institutions. My study further provides an original contribution through its examination of potential factors that may influence faculty conceptions, namely the academic background and teaching experience of the faculty, as well as the curriculum language used within their polytechnic institutions. Additionally, my research is the first to explore the differences in how faculty conceive of curriculum when discussing their classroom experiences and how they describe curriculum when directly asked to state what they believe curriculum is.

1.6 Structure of the Thesis

This thesis comprises six chapters. In this chapter, I outline my rationale for this study, including my research questions, the context of the study, my background, research approach, and my original contribution to the existing body of literature. In the remainder of this section, I will outline the structure of the remainder of this thesis.

In Chapter Two, I contextualize my study within the existing literature relating to curriculum in higher education and the ways in which faculty conceptualize it. In doing so, I demonstrate the ambiguous nature of the term 'curriculum', despite its ubiquitous use in discussions within higher education. I further demonstrate how various curriculum models conceptualize curriculum in unique ways. I conclude this chapter by outlining the gaps present in the literature. These gaps include how instructional faculty conceptualize curriculum as a general concept, free from the context of specific subject matter or overarching topics in higher education, as well as the absence of literature examining the influence of academic origin and years of teaching experience on faculty conceptualizations of curriculum.

In Chapter Three, I describe my methodological approaches and overall research design choices, providing a rationale for why I believe they were the best way to answer my research questions. I begin the chapter by providing an overview of my research design, followed by an explanation for my choice of phenomenography, with its ontological and epistemological perspectives, as the underlying theoretical perspective and research method used in this study. The chapter continues with a detailed explanation of my research design, including its ethical considerations, the participant recruitment methods employed, and the use of semi-structured interviews as the data-gathering method for the study. Next, I detail my data analysis methods, outlining the steps taken to ensure appropriate rigour in my research.

In Chapter Four, I present the outcomes of my research and detail how they answer my research questions. I present the phenomenographic outcome space, comprising five hierarchical categories of description that are qualitatively distinct and represent the variations in how faculty at Canadian Polytechnics conceptualize curriculum. Next, I demonstrate that neither the academic background nor the teaching experience of faculty members appears to impact the complexity or sophistication of faculty conceptions of curriculum. This is followed by an examination of an unexpected outcome I identified during my data analysis, concerning how faculty describe curriculum when discussing courses or programs, as opposed to how they describe curriculum when asked

directly what they believe curriculum to be. Next, I examine faculty experiences with curriculum, which, while not part of my phenomenographic outcome space, provides insight into factors that influence the difference between the descriptive and prescriptive accounts of curriculum. Lastly, I outline the relationship between the use of educational language, expressing more complex conceptions of curriculum, and participation in educator professional development.

In Chapter Five, I present two arguments related to the research outcomes. My first argument is that institutional language related to curriculum is an important factor that influences how instructional faculty conceive the term 'curriculum'. In my second argument, I argue that curriculum-related professional development, as well as opportunities and space for curriculum conversations, are necessary for instructional faculty to develop more complex conceptions of curriculum.

In the concluding chapter, I provide a summary of this thesis. I summarize the research outcomes, outlining how they answer my three research questions. This is followed by an explanation of how my research makes an original contribution to the existing knowledge about faculty conceptions of curriculum. I then reiterate the key elements of my discussion chapter, providing an overview of three arguments I present relating to the research outcomes. Following this overview, I reflect on my use of phenomenography and the resultant research outcomes, outlining the limits to the truth claims I have made in this thesis. Next, I outline the implications that arise from the research outcomes. I close this chapter and the thesis with my concluding thoughts, providing a path towards further research opportunities.

Chapter 2: Curriculum in Higher Education–Contextualization of the Literature

2.1 Introduction

In this chapter, I contextualize the existing literature regarding curriculum, its application in higher education, and the ways in which faculty experience it. In doing so, I identify the lacunae in higher education curriculum research and how my research fills these gaps. The chapter demonstrates how the term 'curriculum' is ubiquitous while simultaneously ambiguous within the context of higher education, resulting in expansive variation in how people understand and experience it. This is achieved through the exploration of several aspects related to higher education curriculum.

The first aspect examined is the historical context of curriculum thought and debate in higher education. This is followed by a brief overview of the relationship between individuals' conceptualizations of curriculum and their thoughts regarding the purposes of higher education. Next, I outline the absence of a shared understanding of curriculum in higher education. Examining select curriculum definitions found in literature, I review curriculum classifications identified in various curriculum models and frameworks. This is followed by critically examining the current body of literature relating to the different ways faculty experience curriculum. In doing so, I demonstrate that while there has been a significant amount of research into how higher education faculty conceptualize issues relating to their instructional practice, their conceptualizations of curriculum have been largely ignored. Lastly, this chapter briefly explains the limited research into the relationship between years of teaching experience and faculty conceptualizations of curriculum as well as the sparsity of research into the influence of academic origin on faculty conceptions of curriculum.

Before proceeding with the body of this chapter, I need to acknowledge that the existing body of literature relating to curriculum is expansive, and within it are contained numerous distinct areas of study. While interesting and deserving of exploration, it would not be possible for me to explore the entire field within the

constraints of this thesis. Topics such as the complete history of curriculum (Doll, 2008; Ellis, 2004/2013; Popkewitz, 2009; Smith, 1996/2000; Stenhouse, 1975), its etymology, the influence of varying educational traditions (Anglo-American Curriculum versus German-Scandinavian Bildung-Didaktik) (Lindén et al., 2017), the history of higher education (Ashwin, 2022), and models of curriculum (Applebee, 2008; Muller & Young, 2014; Parker, 2003; Young, 2014) are impossible to cover within the scope of a thesis. As such, I have either covered them briefly in support of the rest of my thesis or not at all. The focus of this chapter is to provide only the relevant information and background necessary to explain my research topic, describe the lacunae present, and contextualize the research outcomes described later in Chapter 4.

2.2 Literature Review Methodology

To effectively examine the research literature related to my research questions, I began by searching the Academic Search Ultimate and Scopus databases, as well as Google Scholar, using keywords in conjunction with Boolean and truncation operators to identify literature potentially relevant to answering my research questions. My searches were related to four general topics: conceptions of curriculum in higher education, curriculum in higher education, faculty perspectives and academic origin, and curriculum history. The search terms I used for each were:

- Conceptions of Curriculum
  - Conceptions of Curriculum
  - Conceptions of Curriculum Higher Education
  - Phenomenographic Conceptions of Curriculum Higher Education
  - Conceptions of Curriculum Higher Education Phenomenography
  - Faculty Conceptions of Curriculum Higher Education
  - Phenomenograph* Curriculum
- Curriculum in HE
  - "curriculum theory" AND "higher education"
  - "higher education" curriculum
- Faculty Perspectives and Academic Origin
  - "academic origin" AND "faculty conceptualization"

- o "academic origin" AND "faculty perspective"
- Curriculum History
- o history of curriculum
- o "curriculum history"
- o "curriculum history" AND "higher education"

After completing these searches, I compared the results and deleted duplicate entries. I then reviewed the abstracts of the compiled list of resources to verify their relevance to my research.

As I read each of the identified articles and books, I noted the literature cited by the author that was relevant to my research and had not been identified in my initial database search. Using this snowballing method, I located additional literature to include in my review.

I began my literature review within the higher-education context of my undergraduate and graduate studies and the one in which I currently work. Drawing on this context and my experience, I selected the terms for my initial literature search. However, as I reviewed the literature identified in my initial search, I found that the term 'faculty' limited my initial results, as it is not commonly used in other countries to refer to academic instructional staff. Other terms that I encountered included professor, academics, lecturer, tutor, docent, and instructor. I choose not to repeat my search of the academic databases with the new terms I found to refer to 'faculty'. Focusing instead on the application of the snowballing method of expanding my literature review and including literature that used terms other than 'faculty'.

I recognize the potential limitations of not repeating my search of academic databases using all the additional terms for academic instructional staff. In doing so, I may have missed relevant academic literature addressing my research questions or that could have informed my thesis. However, I feel that my use of a snowballing approach, closely reviewing the citations of all the literature I encountered, sufficiently mitigates this limitation. An additional limitation of my initial literature review is that, by using English-language search terms, I was unable to identify any relevant literature published in other

languages. This limitation was only partially mitigated by my snowballing approach, which relied on other authors potentially citing non-English-language research.

While the above methods helped identify relevant literature, they were insufficient to ensure that I was aware of the most recent literature being published while conducting my research and writing this thesis. To mitigate the risk of missing key new literature, I set up an alert within Google Scholar for 'Higher Education Curriculum' to receive email notifications of any new publications related to the topic. I regularly reviewed these notifications and added relevant results to my review. I continued to review these alerts through the end of February 2025.

2.3 Higher Education Curriculum Debate and Research: From Neglected to Incomplete

Curriculum as a topic of study and academic debate has a rich history over the last 160 years. Many books have been written about various curriculum topics and contexts, numerous academic journals are dedicated to curriculum studies, and countless curriculum-related articles have been published in other academic journals within the broader field of educational research. Searching for the term 'curriculum' using Google Scholar yielded over 395,000 results. Curriculum, then, is an expansive subject. I will not describe it in its entirety in this thesis. That being said, some areas of curriculum research have not yet been thoroughly examined. Curriculum in higher education is included among these underexamined areas (Blackmore & Kandiko, 2012; Krause, 2022; Tight, 2023). At the turn of the 21st century, the absence of curriculum in the broader higher educational discourse began to be noticed. Given that curriculum serves as the basis of learning and teaching and that higher education was undergoing a period of significant change, the lack of debate, research, and overall neglect of the topic at the time was concerning to researchers (Barnett et al., 2001; Barnett & Coate, 2005; Le Grange, 2006). The absence of curriculum within the academic discourse is particularly concerning in the ongoing debates relating to the role of higher education in society.

Now, 25 years into this century, higher education curriculum research has increased, resulting in a corresponding rise in academic discourse (Blackmore & Kandiko, 2012; Lindén et al., 2017; Tight, 2023). Various topics have been explored within this increase in curriculum research. These include issues such as curriculum review, coherence, structures and processes, and strategic change (Blackmore & Kandiko, 2012), how researchers have approached curriculum research (Annala et al., 2016), improving the field of curriculum in higher education (Bovill & Woolmer, 2019), issues relating to different levels of understanding of curriculum in higher education (Quinn, 2019), and the differing mindsets that influence faculty during curriculum change (Krause, 2022). However, while the broad lacuna of higher education in curriculum studies has begun to be filled, significant gaps remain. These include a lack of a coherent theoretical approach to explaining the importance and meaning of curriculum, as well as an incoherent use of research approaches and methodologies resulting from the wide variety found in the research literature (Lindén et al., 2017). There continues to be a "lack of rigorous scholarly debate and theorizing" (Krause, 2022, p. 39) regarding higher education curriculum. Others have noted that a large portion of published curriculum research is focused on a particular discipline, institution, or course of study (Annala et al., 2016; Tight, 2023). Lastly, there is a lack of research concerning curriculum conceptualizations (Krause, 2022; Tight, 2023), indicating that there is limited research into curriculum as a phenomenon in itself.

These gaps in the literature need to be addressed to gain a more complete understanding of curriculum in higher education. Regarding the issue surrounding the use of theory, I agree that the field of curriculum research in higher education does suffer from a lack of theoretical coherence. However, I agree with Annala et al. (2016) that this stems from researchers assuming a shared understanding of the term, for it is not possible to achieve coherence when each researcher has a different conception of what curriculum is to begin with. As to the issue of a lack of coherence in approaches and methodologies in higher education curriculum research, I would argue that the wide variety of approaches and methodologies used is an outcome of curriculum research being most commonly bound to the specific contexts of the areas of study in

which curriculum is employed. That is to say, researchers are conducting research into curriculum within the academic fields they teach, and with that variety of academic fields comes a wide variety of methodologies that the researchers are knowledgeable and comfortable using. As such, it is less of an issue than it has been made out to be.

The last three gaps identified — those of a lack of scholarly discourse, research free from subject-specific contexts, and the phenomenon of curriculum — are what my thesis intends to address. By presenting my research outcomes and the discussion in Chapter 5, I actively contribute to and further the scholarly debate in higher education curriculum studies. As I will demonstrate in the following chapter, by choosing Phenomenography as my research methodology, I avoid the issue of researching within a subject-specific context, selecting research participants from various areas of expertise and instruction. The resultant phenomenographic outcome space identifies and describes the variation in how faculty experience, perceive, or conceive curriculum. In Chapter 3, I will further explain how phenomenography is best suited to answer my research questions and address the gap in the literature.

2.4 Curriculum Conceptions and Purposes of Education

Before discussing the existing literature related to the ways in which curriculum is understood in higher education, I need to briefly explain the relationship that often exists between curriculum thought and beliefs regarding the purposes of education, as the latter's requirements often shape the former. I explain the relationship between these two phenomena to point out that conceptions of curriculum do not occur in isolation. They are connected to conceptions of other phenomena that individuals have.

To demonstrate this relationship, I will use the thoughts and beliefs expressed by three seminal educators: Petrus Ramus (1515-1572), Regius Professor of Logic and the University of Paris; Cardinal John Newman (1801-1890), Rector of the Catholic University of Dublin; Franklin Bobbitt (1876-1956) Professor, University of Chicago. Ramus viewed the university's purpose or pedagogical responsibility as teaching students to apply knowledge of the liberal arts in

everyday life in a practical and useful manner (Triche & McKnight, 2004). As such, he proposed organizing the discreet structures of knowledge that comprised the liberal arts, these seven disciplines forming the curriculum that could then easily be systematically taught to students (Triche & McKnight, 2004). The relationship between the purpose of university and curriculum thought can be seen in the discourses of Cardinal John Newman in the mid-1800s, who argued for what he believed to be the purpose of the liberal university, the pursuit of universal knowledge, which should include all known branches of academic study (Newman, 1873/1996). To achieve this, universities needed to create,

> *a pure and clear atmosphere of thought, which the student also breathes, though in his own case he only pursues a few sciences out of the multitude. He profits by an intellectual tradition, which is independent of particular teachers, which guides him in his choice of subjects, and duly interprets for him those which he chooses. (p. 77)*

For Newman, knowledge was an end in itself; as such, the curriculum available to students should not be limited to a few select disciplines but should include all disciplines for students to choose to study. A final example of this relationship is evident in the writings of Franklin Bobbitt (1918, 1924/1975), in which he called for education to create a workforce needed to build industry and citizenship, thus improving society as a whole. This curriculum would build up knowledge of thought, hygiene, and citizenship, and to support this, a curriculum needed to be written using clear statements as to the objectives of the learning that would take place across the subjects and levels of education.

In the above examples, curriculum is conceptualized in three distinct ways:

1. A course(s) of study where curriculum is simply the distinct subjects that a person would learn about in a university.
2. The collection of all disciplines of knowledge from which students choose what knowledge they wish to learn.

3. The detailed specific knowledge, skills, behaviours, and attitudes that should be learned relative to the subject of study across education, from elementary school to college.

One factor that is important to note is that not only do the three examples conceptualize curriculum in different ways, but the specific context of the level of education being described differs between university and K-12 general education. While Bobbitt included colleges in his new vision of what a curriculum should be, his experiences and research were conducted in the K-12 education system and not higher education (Kliebard, 2004). The university curriculum of Ramus and Newman is broad and discipline-based. In contrast, Bobbitt's curriculum is far more prescriptive, providing great detail as to the specific knowledge to be taught in the various subjects and grade levels. To me, this indicates that curriculum is two distinct phenomena within K-12 and higher education, as it is experienced differently by teachers or instructors working in the two different educational sectors.

2.5 The Absence of a Shared Understanding of Curriculum in Higher Education

In the previous chapter, I stated that the term 'curriculum' was ambiguous despite its prevalent use in the context of higher education. This is not a new issue in higher education, and I am certainly not the first person to notice this. Curriculum researchers and theorists have noted this lack of shared meaning over the years (Quinn, 2019; Tight, 2023). Often, these statements have been offered with a lamenting tone, with the author calling for this to change through increased dialogue within higher education institutions or across the sector as a whole (Annala et al., 2016; Barnett & Coate, 2005; Bovill & Woolmer, 2019; El-Astal, 2023; Fung, 2017; Krause, 2022; Lattuca & Stark, 2009; Phan et al., 2016). At other times, these statements have been offered as a warning, cautioning those who are about to engage with or are already engaging with curriculum work, of the potential pitfalls that lie before them if they assume that all of those whom they are working alongside share a common understanding of the term (Boughey & McKenna, 2021; Fraser & Bosanquet, 2006; Mäkinen & Annala, 2010; Parker, 2003; Quinn, 2019). Nevertheless, here I am, another

curriculum researcher, noting this problem as something that has yet to be resolved.

2.5.1 Defining Curriculum - Semantic Ambiguity

The absence of a collective understanding of the term 'curriculum' and its resultant ambiguity amongst those working in higher education is evidenced in, and I would argue perpetuated by, the multitude of definitions presented over time. These definitions can be found in textbooks, academic articles, conference presentations, blogs, higher education centres of teaching and learning websites, and anywhere else that curriculum is explained to non-curriculum specialists. In the efforts to explain what curriculum is, it seems as if there are as many definitions as there are people offering them, with each definition influenced and constructed within the context of its author. These contexts included the level of education they are connected to, from kindergarten to post-graduate studies, the subject matter they discuss, or even the governmental jurisdiction in which they find themselves situated.

In recent years, academics have sought to make sense from within the plethora of disseminated definitions, selecting a limited number to sort, organize, classify, and eventually describe; all to provide some semblance of collective understanding. While some have helped clarify the mottled mural of thoughts in the literature, others have only added to the expanse of ideas. These efforts to provide clarity have used different attributes to delineate one group of definitions from another to attain some form of clarity. Examples of these organizational categories have included the historical time frame of when the definition was written (El-Astal, 2023), to demonstrate the shifting educational philosophies through time, the themes present (El-Astal, 2023) to demonstrate shared ways of thinking, orientation or perspective (Cliff et al., 2020; Walker, 2002) to show common factors of influence, the formal organization of curriculum (Krause, 2022) to show variations in curriculum structure, the intended and unintended impacts (Kelly, 1977/2009) to demonstrate outcomes of curriculum, the scope of the curriculum (Kelly, 1977/2009; Walker, 2002) to demonstrate the range of intent of the curriculum, descriptiveness and prescriptiveness (Ellis, 2004/2013) to demonstrate the amount of control over

instructional choice; length and complexity (Ellis, 2004/2013), and the conceptual and ideological paradigms (Krause, 2022) to situate the definitions within formal educational models. The effectiveness of these approaches to organizing curriculum thought is dependant as much on the reader's contextual understandings as the context of the writer. As an example, Orlosky and Smith's definition is very straight forward defining curriculum as "the content pupils are expected to learn" (Orlosky & Smith, 1978, p. 3). Conversely, I would describe the working definition presented by El-Astal (2023) as saying everything and nothing at the same time, as he writes,

> *Curriculum is a prescriptive content that illustrates what will be taught in a given educational program (input or subject matter), who will teach (teacher), who will be taught (learner), with what tools and in what context (milieu), with what effect (output/outcomes), and how that will be assessed (assessment). (p. 194)*

As this thesis adds to the ongoing efforts to address the lack of a shared understanding of curriculum, I, too, shall categorize a collection of existing definitions to provide context and a shared understanding in support of my research and the outcome space I identified as a result of my phenomenographic analysis, which I describe in greater detail in Chapter 4.

For this thesis, I classify definitions of curriculum in the following categories, which are representative of the outcome space identified during my phenomenographic analysis of the interviews I conducted. This outcome space will be presented in Chapter 4. In my first category of definitions, *Prescriptive Definitions*, curriculum is defined as something that is assigned to be taught, just as a pharmaceutical prescription dictates the specific medication that a person should be given—these definitions situate curriculum as something predefined and external to the instructor and students. The second category, *Subject-Focused Definitions*, is defined as the knowledge, skills, or attributes (KSAs) that students are expected to learn. This category includes definitions focused on the content learned by the students. In the third category, *Structural Definitions*, curriculum is defined in terms of the organized structure in which learning occurs. By focusing on the structure, these definitions frame curriculum

as an ordered process to be followed by the student. In my fourth category, *Teaching and Assessment-Focused Definitions*, curriculum is defined in terms of the planning of learning experiences by the instructor and then assessing students in relation to the planned learning outcomes. In these definitions, the focus is on the pedagogical practices of the instructor and their ability to evaluate student achievement of the learning outcomes. The fifth category of definitions I identified, *Personal-Social Development Definitions*, defines curriculum outside of or beyond a specific subject matter. It includes the intended and unintended learning impacts on a student's personal and social development. Each of these first five categories focuses on a central aspect of curriculum. However, other definitions of curriculum are more expansive and include multiple aspects or elements that are included as curriculum. These definitions represent my final category, *Composite Definitions*. These definitions frame curriculum as a combination of some or all of the categories I have described. Curriculum in these defections can be almost anything the author or reader wants it to be. This category is exemplified by Lattuca and Stark's (2009) summary of the types of definitions for curriculum that they have heard from faculty, administrators, graduate students, and observers of higher education. Table 2.1 lists examples of definitions that illustrate each category.

Category	Example Definitions
Prescriptive Definitions	• But in some countries the first thing that comes to mind when mention is made of the curriculum is a book of instructions to teachers. … Such a view equates the curriculum with a written prescription of what it is intended should happen in schools. (Stenhouse, 1975, p. 2) • For many practicing teachers, "curriculum" is understood as what the district office requires them to teach, what the state education department publish in scope and sequence guides. (Pinar, 2004, p. 185) • In higher education, the term curriculum is often used to refer to the formal course of study offered by an academic institution. This usually is published as an official document in the course catalog or bulletin. It brings order and design to teaching and learning that then can be followed by college and university officials, students, and faculty as well as by such external constituencies as government agencies, accreditation bodies, consumer groups, and prospective students. (Thelin, 2020, p. 336)
Subject-Focused Definitions	• The formal and informal content and process by which learners gain knowledge and understanding, develop skills, and alter attitudes,

Category	Example Definitions
	appreciations, and values under the auspices of that school. (R. C. Doll, 1996, p. 15) • A curriculum is a particular way of ordering content and purposes for teaching and learning in schools. Content is what teachers and students pay attention to when they are teaching and learning. Content can be described as a list of school subjects or, more specifically as a list of topics, themes, concepts, or works to be covered. Purposes are the reasons for teaching the content. (Walker, 2002, p. 5)
Structural Definitions	• The body of courses that present knowledge, principles, values, and skills that are the intended consequences of formal education. (Levine, 1978, p. 3) • the 'undergraduate curriculum' as: [T]he formal academic experience of students pursuing baccalaureate and less than baccalaureate degrees. Such a curriculum is formalized into courses or programs of study including workshops, seminars, colloquia, lecture series, laboratory work, internships, and field experiences. (Ratcliff, 1997, p. 6) • In higher education, the term curriculum is often used to refer to the formal course of study offered by an academic institution. (Thelin, 2020, p. 336)
Teaching & Assessment-Focused Definitions	• The expectation that higher education will help students to become more autonomous compounds that complexity and draws attention to curriculum scholars' view that curriculum is more than just content. It can be defined as a set of purposeful, intended experiences. It may be divided into at least four parts: content, organisation [sic], learning and teaching methods, and assessment. (Knight, 2001, p. 369) • We may take a curriculum in higher education to be a pedagogic vehicle for effecting changes in human beings through particular kinds of encounter with knowledge. (Barnett, 2009, p. 429)
Personal-Social Development Definitions	• … the authors of this text offer the following definition of curriculum: that reconstruction of knowledge and experience that enables the learner to grow in exercising intelligent control of subsequent knowledge and experience. Through the medium of that thing we call curriculum, the learner is to grow in knowledge/ability — or in the social power and insight required of the good person leading the good life in the good society. (Tanner & Tanner, 1995, p. 189) • The hidden curriculum can be understood as "the norms and values that are implicitly, but effectively, taught in schools and that are not usually talked about in teachers' statements of end or goals", although in actuality many of these practices are not really "hidden" – they are simply not officially acknowledged. (Bali, 2013, p. 70)
Composite Definitions	Over the years, we have solicited definitions of curricula from faculty, administrators, graduate students, and observers of higher education. Most

Category	Example Definitions
	people include at least one and usually more of the following elements in their definitions:
	• A college's or program's mission, purpose, or collective expression of what is important for students to learn
	• A set of experiences that some authorities believe all students should have
	• The set of courses offered to students
	• The set of courses students actually elect from those available
	• The content of a specific discipline
	• The time and credit frame in which the college provides education. (Lattuca & Stark, 2009, pp. 1–2)

Table 2.1 Categories of Curriculum Definitions with Examples

As evident by the plethora of definitions of curriculum present within education studies literature, it is impossible to discern precisely what someone is referring to when they use the term. With this ambiguity of meaning comes a lack of shared understanding when engaging in discussions relating to curriculum. As Ratcliff (1997) warned:

> *When a committee, a dean, or a department chair contemplates changing the curriculum, it is dangerously easy to make an assumption that everyone agrees on what curriculum is .... Since faculties regularly work with curriculum, it is deceptively simple to assume that everyone agrees on what it is or should be. Making this leap of faith can lead to unnecessary disputes over nomenclature, and worse, aborted attempts at fundamental change. (p. 5)*

This "illusion of consensus" (Lattuca & Stark, 2009, p. 3) has several negative impacts, including difficulties when individuals and groups who hold different views work together to make improvements to the curriculum as people form their arguments based on differing definitions, assumptions, and conceptualizations (Fraser & Bosanquet, 2006; Lattuca & Stark, 2009). This issue cannot be mitigated unless there is clarity around the definitions used and a shared language of curriculum established amongst those involved in curriculum review and renewal (Bovill & Woolmer, 2019; Fraser & Bosanquet, 2006).

Relying on definitions to establish a shared understanding of curriculum is not only ill-advised and inefficient but also a Sisyphean undertaking, as the shifting contexts, purposes, and understanding of education within higher education continuously add to the height of the proverbial hill being climbed. Simply classifying existing definitions in different ways provides a measure of understanding, but it does not result in a full view of the complex nature of curriculum. Instead, these different attempts at classifying and organizing definitions of curriculum demonstrate that not only is there a lack of consensus on what the term 'curriculum' means, but that a shared understanding is needed to understand curriculum in higher education fully.

2.5.2 From Definitions to Frameworks and Models

Researchers and authors have presented various frameworks or models for curriculum in their efforts to understand and describe the complexity of curriculum. Much like an architect's model of a building, curriculum models are a selective or simplified representation of reality, as it would not be possible to include every minute detail or component in a model. While incomplete, a model is representative of what its creator views or conceives as important. Therefore, within these various curriculum models, the important components of the curriculum, as well as the purpose of curriculum are presented, albeit only from the author's unique perspective. That being said, the authors of the various curriculum models recognize that curriculum possesses different facets, purposes, impacts, and scopes, thus requiring a more structured approach to describe it effectively. Within the curriculum theory presented in the literature, it is not uncommon to find curriculum described as encompassing differing subcategories or types to clarify the distinct nature of the curriculum they describe.

Among the different models of curriculum put forth, there are common approaches to classifying the different types of curricula. Examples of these common classifications include formal, official, or prescribed curriculum (Cuban, 1993; Eisner, 1994; Kelly, 1977/2009); the informal curriculum (Eisner, 1994; Kelly, 1977/2009); the planned, designed, or intended curriculum (Barnett & Coate, 2005; Bernstein, 1975/2003; Cuban, 1993; Kelly, 1977/2009; Knight,

2001); the taught or delivered curriculum (Barnett & Coate, 2005; Bernstein, 1975/2003; Cuban, 1993; Knight, 2001); the received or understood curriculum (Bernstein, 1975/2003; Cuban, 1993; Kelly, 1977/2009; Knight, 2001); the hidden curriculum (Bernstein, 1975/2003; Kelly, 1977/2009). Less common classifications include the tested or assessed curriculum (Cuban, 1993) and the null curriculum, or knowledge explicitly excluded from the curriculum (Eisner, 1994). Regardless of the different ways of classifying curriculum based on specific aspects present within them, these models present a complex conception of curriculum that goes beyond conceptions that view curriculum as simply the content that students are expected to learn. This complexity is reflective of what Knight (2001) argues is the common view of curriculum scholars, particularly in the context of higher education, that curriculum as content is not sufficient and that while content is one part of curriculum, organization, learning and teaching methods, and assessment are also parts of curriculum. This view is echoed by Blackmore and Kandiko (2012), who write:

> *A curriculum can be viewed as a 'recipe', as one of many ways that knowledge can be organised, structured and made meaningful by students. The curriculum is the result of a continual interaction between the 'product' of learning, such as students' knowledge development, skills and attributes, and the 'process' of learning through reflection and related pedagogical practices. (p. 9)*

2.6 Conceptualizations Held by Faculty in Higher Education

Over the last 30 years, a significant amount of literature has been published that examines the perspectives or conceptions of university teachers regarding their teaching practice. Examples of this include Åkerlind (2003), Ashwin (2006), Ojo et al. (2019), and Tight (2016). Using phenomenography, which seeks to describe and map the variation in how individuals experience or conceive of a phenomenon (Marton & Booth, 1997), this body of research has examined a wide range of topics. These topics include university teachers' conceptions of and approaches to teaching (Ashwin, 2006; Entwistle et al., 2000; Gonzalez, 2009; Mimirinis & Ahlberg, 2021; Trigwell & Prosser, 1997), perceptions of student learning (Samuelowicz & Bain, 1992), the relative

responsibilities of learners and teachers (Åkerlind & Jenkins, 1998), the meaning that teaching holds for them (Åkerlind, 2003), and their views on the relationship between teaching and learning (Åkerlind, 2003, 2007). Further research has examined academics' conceptions of research and teaching (Brew, 2001; Prosser et al., 2008), academics' conceptions of their growth and development as university teachers (Åkerlind, 2003, 2007), conceptions of online teaching (Gonzalez, 2009), teachers' perceptions of the leadership environment (Martin et al., 2003), faculty conceptions of teaching specific subject matter (Ojo et al., 2019), and the relationship between subject-matter practice and teaching (Shreeve, 2009). These research areas have added to the collective understanding of the important role that higher education instructors' conceptualizations play in their professional practice. It is evident that many aspects of teachers' experience and perspectives within the higher education environment have been examined. However, an examination of the perspectives that higher education instructional faculty have relating to the concept of 'curriculum', free from the context of the subjects they teach, has seen little exploration and as such, requires further investigation, which this thesis aims to do.

The body of research regarding faculty conceptions of curriculum is limited and encompasses a range of methodologies for examining the topic. These include authors' summarizing their recollected experiences talking about curriculum with faculty throughout their careers (Lattuca & Stark, 2009), systematized literature reviews in order to classify the different ways in which curriculum was conceptualized in higher education within the literature (Annala et al., 2016; Stentiford & Koutsouris, 2022), the application of other theorists' conceptual curriculum frameworks or models to curriculum development and improvement in higher education (Bali, 2013; Bovill & Woolmer, 2019), and lastly, how faculty in higher education view curriculum (Fraser & Bosanquet, 2006; Phan et al., 2016; Reid & Petocz, 2006; Roberts, 2015; Zou et al., 2020).

The literature reviews (Annala et al., 2016; Stentiford & Koutsouris, 2022) provide a limited view of faculty conceptions of curriculum. To attribute the identified conceptions to instructional faculty, it is necessary to assume that the

25

original researchers are also actively teaching at their institutions. Furthermore, the conceptions identified in the reviewed literature are closely tied to the research context of the initial authors. Thus, by being context-bound, these conceptions may be limited and not representative of all of the conceptions of curriculum held by the authors of the reviewed studies. The literature that applies existing curriculum frameworks (Bali, 2013; Bovill & Woolmer, 2019) involves research regarding higher education curriculum; they do not investigate the conceptions of teaching faculty. Instead, they only apply existing conceptual frameworks from other theorists and researchers. In doing so, their conclusions are based on their belief that the other authors' conceptual frameworks are valid representations of how faculty experience curriculum.

Of the five research articles that examined how faculty in higher education view curriculum, two explored faculty conceptualizations of overarching topics not related to specific course curriculum, but related to how the two topics, sustainability (Reid & Petocz, 2006) and internationalization of curriculum (Zou et al., 2020) were incorporated into the curriculum that was taught. Only the remaining three articles examined curriculum in general and separate from a specific subject-based context. Two articles, Roberts (2015) and Phan et al. (2016), applied an interpretive qualitative methodology involving interviews and thematic analysis to identify faculty views of curriculum. The final article by Fraser and Bosanquet (2006) used phenomenographic methodologies to identify faculty conceptualizations of curriculum, in the same manner as other researchers have used it to explore faculty conceptions of their teaching practice. As these three articles are the only ones that I could locate that explored how faculty understood curriculum in a general sense, I will examine each of them in the following paragraphs to outline their methodologies, outcomes, and identify the gaps that they leave in understanding faculty conceptualizations of curriculum.

Roberts (2015) studied how academics make decisions relating to curriculum, along with their perceptions of what influences impact their choices. Their methodology involved interviewing 20 academics from four different disciplines and one interdisciplinary group within a university. Then, inductively coding the

transcripts and identifying patterns and themes within the discrete comments related to curriculum influence. The outcomes of this study identified several influences that impact academics' curriculum decisions. These influences are the academics' beliefs about educational purposes, discipline, research, teaching and learning, students, institutional context, sociopolitical context, and academic identity. From these influences, it was determined that the academics' beliefs relating to the first influence (educational purposes) defined distinct orientations to curriculum. The five orientations identified were:

- *Discipline-based orientation, which aims to induct students into the discipline.*

- *Professional and academic orientation, where students are prepared for a range of future pathways that include professional practice, research and learning at university.*

- *Personal relevance orientation, which aims to help students make sense of their everyday experiences for the purposes of self-understanding and personal growth.*

- *Social relevance and reform orientation, which aims to develop students' understanding of social issues and structures, with a view to social reform.*

- *Systems design orientation, which aims to design an effective system for learning.(Roberts, 2015, p. 544)*

These curriculum orientations reflected the disciplinary knowledge practices of those interviewed but were also found to be shaped by the ideologies and course contexts of the individual participants. As a result of this mixture of discipline-based practices and individual beliefs, the curriculum orientations were represented not only within specific disciplines but also across disciplines.

While I believe Roberts' work provides valuable insight into how faculty think about curriculum, the curriculum influences are presented as a collective whole with no explanation as to their relationship with one another or description of how they influence curriculum decisions or what types of curriculum decisions

each of them influences. Likewise, the educational purpose-based curriculum orientations are also presented without explaining how they are related, if at all. For each orientation, other than a brief description, the only information provided was which disciplines were represented by the orientation.

Phan et al. (2016) studied how a Vietnamese university's senior staff, students, and teachers understood curriculum. Within their study, 15 teachers were interviewed, and the transcripts were then thematically coded to identify the different ways in which curriculum was understood. Five different understandings of curriculum were identified from the teacher responses. They were: curriculum as the structure and content of a course, the structure and content of a unit or a subject, textbooks and the content of the textbooks, teaching experience, and learning experience. Within these views of curriculum expressed by teachers, curriculum was generally viewed as teacher-focused, textbook-driven, and product-focused. Phan et al. argue that viewing curriculum in these ways contradicts the process-oriented and student-centred research findings found in Western literature, and as such, they argue for an increase in professional dialogue, institutional autonomy, and academic freedom in curriculum development to improve higher education in Vietnam. As with Roberts (2015), Phan et al. describe the different views expressed by teachers at the university and do not provide information or conclusions regarding any relationship that may exist between the different views. They are presented simply as being present within the teaching body.

The final article that examined faculty conceptions of curriculum is Fraser and Bosanquet's (2006) phenomenographic research into an Australian university's faculty's conceptions of curriculum. As I mentioned, phenomenography seeks to describe and map the variation in how individuals experience or conceive of a phenomenon. It does so through the creation of an outcome space, an ordered set of qualitatively unique categories that describe the variation in how people experience a particular phenomenon (Marton & Booth, 1997). The organization of these categories, also referred to as categories of description, increases in sophistication or complexity, with the higher categories being inclusive of the

28

lower ones (Marton & Booth, 1997). I explore phenomenography in greater detail in the following chapter.

Fraser and Bosanquet (2006) conducted 25 semi-structured interviews of academic teachers from various disciplines and with varying instructional experience, to collect the descriptions of each participant's conception of curriculum within the context of their university. The transcripts were then analyzed from these interviews, and four distinct categories of description, ways that faculty conceptualize curriculum, were identified. They are:

> *Category A: The structure and content of a unit (subject);*
>
> *Category B: The structure and content of a programme of study;*
>
> *Category C: The students' experience of learning;*
>
> *Category D: A dynamic and interactive process of teaching and learning.*
>
> *Categories of understanding A and B conceptualise the curriculum as a product that can be defined and then recorded on paper. These views of curriculum focus on what the individual teaches, i.e. a unit or subject, but may also incorporate the whole programme of study undertaken by a student. In Category C, the curriculum is conceptualized as a process and structure that enables student learning, and Category D views the curriculum as a dynamic, emergent and collaborative process of learning for both student and teacher. (Fraser & Bosanquet, 2006, p. 272)*

In explaining the variation between the categories of conceptions of curriculum, Fraser and Bosanquet identify two distinct orientations toward curriculum that are apparent in the categories: a product orientation and a process orientation. In Categories A and B, curriculum is experienced from a product orientation, where curriculum is teacher-directed. In Categories C and D, curriculum is experienced from a process orientation that is student-centred. In addition to the distinct curriculum orientations, the variation between the categories is further explained by the increasingly complex qualitative differences in both the

curriculum focus and the student/teacher responsibilities that are unique to each category. Unlike Roberts' (2015) or Phan et al.'s (2016) curriculum orientations and understandings, the relationship between these faculty conceptions of curriculum is clear. This clarity allows Fraser and Bosanquet (2006) to apply "Habermas's theory of 'knowledge-constitutive interests' (1972), as expounded by Cornbleth (1990), Grundy (1987), and Kemmis and Fitzclarence (1986)" (p. 279) as a framework to analyze the categories of description further, viewing each through three fundamental human interests to understand the outcome space better, describing curriculum from a technical interest, a practical (communicative) interest, and an emancipatory interest.

Fraser and Bosanquet's work is prominent among the minimal research published to date that explores how faculty conceptualize curriculum, free of the context of discipline-based subject matter or overarching curriculum topics, and that seeks to identify these conceptions empirically and not simply assign conceptions based on intuitive thoughts of what theorists believe based on their observations of higher education. As such, it is frequently cited within other literature, with Google Scholar showing that it has been cited 570 times.

While I recognize the importance of this article and believe that the application of phenomenography is the most appropriate methodology for investigating the issue of faculty conceptions of curriculum, I believe that the interview approach used limited the data generated. In their semi-structured interviews, they began each interview with the question, "What is your understanding of curriculum?" (Fraser & Bosanquet, 2006, p. 271). I believe that using the specific term they are investigating in the initial question automatically narrows and restricts the research participants' responses throughout the remainder of the interview, as they would frame all of their responses within their personal and conscious definition of curriculum. Even with probing follow-up questions, the participant would be prone to frame their responses against their internal definition. I argue that to mitigate the risk of participants self-restricting their responses, a different approach would be to avoid using the term 'curriculum' unless the participants used it themselves. Instead, the questions should be framed around their experiences related to the teaching and learning activities within their

classrooms. Additionally, given the context of Australian higher education, the academic teachers interviewed by Fraser and Bosanquet are situated in a teaching context substantially different from the context of faculty teaching at Canadian polytechnics. As I discussed in the introductory chapter of this thesis, faculty teaching at Canadian polytechnics have a wide variety of academic backgrounds, ranging from journey-person certificates in applied trades to technical certificates, diplomas, bachelor's degrees, master's degrees, and doctoral degrees. This contrasts with the Canadian university context, where, at a minimum, instructional faculty hold master's degrees but primarily hold doctorates (Campus Alberta Quality Council, 2022). As such, my research will add to the work of Fraser and Bosanquet through both the examination of a distinct higher educational context and through the avoidance of using the term 'curriculum' until the final interview question. It will also serve to address the gap identified by Annala et al. (2016), "that there is not much cumulative research or discussion of the conceptualisation of curriculum in HE [higher education]" (p. 175).

2.7 The Relationship Between Academic Origins and Instructor Perceptions

In the previous section, I outlined the research that has been published on how teaching faculty conceptualize curriculum, which is directly related to my first research question. While I have shown that the existing literature on that topic is sparse, the literature relating to my second research question is even more scarce. As stated in Chapter 1, my second research question is what relationships exist between faculty members' understandings of 'curriculum' and their academic credentials or the number of years they have taught?

In my search for relevant literature on the influence of academic credentials, I found only two studies that examined the impact of a faculty member's academic credentials or origin and the impact that those credentials may have on their professional practice. Long et al. (2009) examined how the prestige of the higher educational institution from which academics were granted their Ph.D. impacted their research productivity. The other study by Jarvis-Selinger et al. (2007) examined how academic origin influenced academics' perspectives

on their teaching practice. Neither of these topics addressed academics'
perspectives on curriculum.

Concerning the influence of teaching experience on teaching faculty's
perspectives of curriculum, the only reference I could locate was within Fraser
and Bosanquet's (2006) study. They reported that "no relationship was
apparent between the understandings of curriculum expressed by the
participants and the extent of their teaching experience" (Fraser & Bosanquet,
2006, p. 272). As such, my research is among the scant few to examine the
influence of academic origin on faculty conceptions of curriculum and the
relationship between teaching experience and faculty conceptions of
curriculum.

2.8 Chapter Summary

In summary, this chapter contextualizes the existing literature that addresses
curriculum in higher education and how instructional faculty conceptualize it. I
demonstrated that the term 'curriculum', while ubiquitous within higher
education, is ambiguous in discussions unless its meaning is clarified by those
discussing it. I also demonstrated that theorists have presented various
curriculum models, each of which uniquely conceptualizes curriculum.
Research into curriculum in higher education was shown to be traditionally
understudied. Despite increasing over the last twenty years, curriculum
research has largely ignored how instructional faculty conceptualize curriculum
as a general concept, free from the context of specific subject matter or
overarching topics in higher education. In addition to this gap, I demonstrated
that the influence of academic origin and years of teaching experience on
faculty conceptualizations of curriculum is a further gap in the research
literature.

In Chapter 3: Methodology and Research Design, I will outline my research
design and present my arguments in defence of my design choices as the best
approach to answer my research questions. In doing so, I argue why I believe
that Phenomenography is best suited, from an ontological and epistemological
perspective, to answer my research questions compared to other research

methodologies. In support of my research design choices, I will defend my rationale for selecting research participants, my approach to participant recruitment, the methodology employed in conducting research interviews, the ethical considerations that guided my work, and the phenomenographic data analysis methodology used to identify the outcome space. The final topic of defence of my research design examines the limitations of conducting phenomenographic research, the steps I took to mitigate them, and the resultant effectiveness of those steps.

Chapter 3: Methodology and Research Design

3.1 Introduction

In this chapter, I describe the design and methodological approaches I use to answer my research questions. As I outline my choices, I will provide my rationale for why these decisions were made in seeking to answer my research questions in a methodical and rigorous way. To this end, I argue why using phenomenography, as an underlying theoretical perspective and research method, is best suited for this purpose compared to other methodologies. With regard to specific aspects of the research design, I outline and defend my choices as they relate to identifying and selecting research participants, gathering data through semi-structured interviews, and the ethical considerations I had to take into account. I outline and defend the data analysis methodology I employed to effectively answer my research questions, accounting for issues related to the rigour and overall robustness of my research outcomes.

3.2 Research Design Overview

To address the gaps in the body of knowledge relating to instructional faculty's conceptions of curriculum, I identified the following two primary research questions:

> RQ 1 – How do faculty teaching in Canadian polytechnic institutions conceptualize curriculum?

> RQ 2 – What relationships exist between faculty members' understandings of 'curriculum' and their academic credentials or years of teaching?

As I completed the phenomenographic analysis of this study, I noticed a trend in the data that warranted an additional research question. I explain the need for this third research question in greater detail in Chapter 4. This research question is:

> RQ 3 – Are instructional faculty's descriptive accounts of curriculum qualitatively different than their prescriptive accounts?

I have provided a summary in Table 3.1 to provide a quick overview of my study's research design. In this summary, I present the three research questions I sought to answer, the study context, a description of the research participants, the data-generation method employed, the data-analysis methods used, the software used to facilitate the study, and the study outcomes.

Research Design Component	Description
Context of the Phenomenographic Study	• In Canada, each province is responsible for overseeing higher education. • In the province of Alberta, provincial legislation categorizes higher education into six distinct sectors. • One sector, Polytechnic Institutions, is mandated to provide technical education that supports the province's economic needs. • The industry-specific credentials offered include certificates, diplomas, bachelor's degrees, and skilled trades apprenticeships. • This wide variety of programs requires faculty with diverse subject-matter expertise and various academic backgrounds.
Research Questions	RQ 1 – How do faculty teaching in Canadian polytechnic institutions conceptualize curriculum? RQ 2 – What relationships exist between faculty members' understandings of 'curriculum' and their academic credentials or years of teaching? RQ 3 – Are instructional faculty's descriptive accounts of curriculum qualitatively different than their prescriptive accounts?
Research Participants	• 18 Instructional Faculty from four polytechnic institutions • Teaching four different credential levels: ○ Certificate, Diploma, Degree, Skilled Trades Apprenticeship • 7 months to 26 years of teaching experience • Academic backgrounds - Certificate to Doctorate
Data Generation	• 18 Semi-structured interviews • Conducted virtually • Recorded and automatically transcribed • 40 to 60 minutes long

Research Design Component	Description
Process Support Software	- Zoom - ATLAS.ti - Microsoft Word - Microsoft Excel - Microsoft Whiteboard
Analysis Methodologies	- Iterative phenomenographic analysis - Comparative analysis
Research Outcomes	- Phenomenographic Outcome Space 5 categories of description - Inclusive & increasing complexity - Three Comparative Analysis Tables - Teaching Experience – Highest Expressed Conception - Academic Background – Highest Expressed Conception - Descriptive Statements – Prescriptive Statements

Table 3.1 Research Design Summary

My research design aimed to answer the above research questions using methodologies that I argue are best suited to the aims of each question and the context in which the research was conducted. In seeking to identify the ways faculty conceptualize curriculum, my first research question is best answered using phenomenography, a research approach that seeks to identify and map the variation that exists in the ways people experience or conceptualize phenomena (Åkerlind, 2012; Marton, 1981, 1986; Marton & Booth, 1997). Building from my first research question, my second question aims to identify if there is an apparent relationship between how faculty conceptualize curriculum and their academic background and teaching experience. As such, a comparative analysis of the research participants' expressed conceptions, their academic background, and years of teaching experience is necessary to answer the research question. Likewise, a comparative analysis of the expressed statements made by the research participants is best suited to answer my third research question, which aims to identify differences in how faculty describe curriculum when speaking about their teaching contexts

compared to when explicitly asked to state what they think curriculum is. I acknowledge that other approaches to designing research may answer these research questions. I will outline the other research design approaches I considered but chose not to pursue later in this chapter.

3.3 Why Phenomenography?

As I discussed in the preceding chapter, there has been very little research into how faculty in higher education experience, perceive, or conceptualize curriculum in a general manner, free of the contexts of the subjects they teach. As such, I did not have a large pool of established methodologies directly related to my research question that I could draw upon. I have already explained the limitations in two of the three research studies that examined this topic. Both Roberts (2015) and Phan et al. (2016) used interpretive qualitative methods involving interviews and subsequent thematic analysis to address the question of faculty conceptions of curriculum. In short, the research outcomes generated through qualitative thematic analysis only presented different types of conceptualizations, or groups of thought. However, they did not provide a holistic view of how these different ways of understanding were related, if at all. The third research study by Fraser and Bosanquet (2006) did not have this same issue as they had used phenomenography, its theory and methods, to not only identify the different ways in which the faculty in their study conceived of curriculum but also to describe the variation that existed across their outcome space and the ways that these variations of thought were connected.

While I ultimately decided to use phenomenography to answer my research questions, I had considered another qualitative research approach: phenomenology. Both phenomenology and phenomenography are methodologies that investigate phenomena as people experience them, and while they share some commonalities, they have "differing aims, goals and methods, and thus different results" (Larsson & Holmström, 2007, p. 63) As explained by Marton and Booth, "phenomenology aims to capture the richness of experience, the fullness of all the ways in which a person experiences and describes the phenomenon of interest" (1997, p. 117). In doing so, "phenomenology focuses on the common essence of human experience of

phenomena" (Åkerlind, 2025, p. 17). Taking a first-order perspective, the phenomenon is described based on the researcher's observations as seen from outside (Alharbi, 2019; Marton & Booth, 1997; Trigwell, 2006). In contrast, phenomenography seeks to investigate how a group of people experience or understand a phenomenon, describing the variation that exists in how people experience the phenomenon (Åkerlind, 2025; Larsson & Holmström, 2007). Phenomenography takes a second-order perspective, investigating not the phenomenon itself, but the thoughts and views of the people experiencing it (Marton & Booth, 1997; Trigwell, 2006; Webb, 1997).

Returning to my research questions, the differences between these two methodologies are critically important. If my research were intended to describe my observations of curriculum in the different ways that others experience it, phenomenology would have been the methodology I would select. However, while my initial research question asks, "How do faculty teaching in Canadian polytechnic institutions conceptualize curriculum?" my intention is not simply to describe the essence of curriculum as experienced by faculty based on my observations, but to describe the variation that exists in the ways faculty, as a collective group, conceptualize curriculum and the relationship that exists between these different conceptions based on their descriptions of their experiences. Building from this initial research outcome, my other research questions seek to identify influences that may impact the complexity of understanding of curriculum that a faculty member may describe. As such, phenomenography was the most suitable qualitative methodology for answering my research questions.

In addition to considering phenomenology, I explored the possibility of using quantitative research to answer my research questions. More specifically, I had considered using survey research to identify the ways in which faculty conceptualized curriculum based on their responses to a series of statements related to curriculum, using a Likert scale rating to identify the degree to which they agreed or disagreed with the statements. However, using a survey would restrict the level of detail I would gather relating to how faculty conceptualize curriculum, with the research outcomes not providing a holistic view of the

curriculum conceptualizations. The reason for this is that in constructing the survey, I would be drawing from my personal views of what curriculum conception variations were possible. This approach would then restrict my analysis and close it off from any new interpretations of curriculum. Additionally, by providing statements relating to curriculum, I could introduce more complex views of curriculum to the research participants that they had not previously been aware of, which would call the validity of my research outcomes into question.

Alternatively, I could have applied a mixed-methods approach to survey research by including open-ended questions that respondents could then type more detailed and personal answers to my questions. This approach would only slightly mitigate my concerns with using a survey, as I would still potentially introduce more complex ways of viewing curriculum. Furthermore, one of the strengths of phenomenological interviews is the ability of the interview to ask targeted and probing follow-up questions to gain deeper and richer insights into how the interviewee experiences curriculum. I will explain this in greater detail later in this chapter. Nonetheless, open-ended questions in a survey would not allow me to ask these follow-up questions.

3.4 Phenomenography Methodology

As previously stated, my research used Phenomenography as the primary research methodology. Phenomenography aims to identify and integrate variations in how people experience, perceive, give meaning to, or, in other words, conceptualize a particular phenomenon (Åkerlind, 2012; Marton & Pong, 2005; Orgill, 2012; Tight, 2016). Developing from research in the 1970s that examined how university students experienced learning (Marton & Säljö, 1976) Phenomenography has emerged as a distinct theoretical framework and research methodology (Tight, 2016), having been refined and defined over the past 50 years. From its initial application in understanding student understandings, its use has expanded beyond the classroom, with its methodologies being applied to a wide variety of phenomena across many contexts. A phenomenographic research approach enables a thorough and rigorous qualitative investigation into answering my research questions.

3.4.1 Phenomenography: Ontological and Epistemological Perspectives

As a theoretical framework, phenomenography holds a non-dualist ontology (Marton & Booth, 1997) which views people's conceptions of a phenomenon as a product of their interactions with the world around them (Orgill, 2012). In contrast to dualistic ontologies, which separate the observable world from the thoughts of individuals experiencing a particular phenomenon, phenomenographic ontology integrates both (Säljö, 1997). Individuals' conceptions come about as a result of thinking about the phenomenon. Additionally, phenomenography takes a second-order approach in that it does not seek to directly explore the phenomenon (curriculum) but aims to explore people's experiences with it (Larsson & Holmström, 2007; Trigwell, 2006). Within this ontological framing, the interconnectedness and hierarchical relationships between faculty conceptions can be identified.

From an epistemological position, phenomenographic research is grounded "in other people's experiences" (Richardson, 1999, p. 63) rather than that of the researcher. The task for the researcher is to interpret the research participants' accounts of their experiences. Through the discursive practice of the interview, research participants can account for their experiences and thoughts concerning the phenomenon being explored, which, in my case, is curriculum. These accounting practices "are of course highly social and cultural phenomena and they provide the conceptual resources by means of which individuals organise their contributions to the situated discourse" (Säljö, 1997, p. 179). This allows the same phenomenon, curriculum, to be examined across differing educational and personal contexts.

The epistemological claims of phenomenographic theory have a direct relationship with the analytic strategies used as part of the methods of phenomenographic research (Åkerlind, 2025). These epistemological claims and the associated analytic strategies are:

- The claim of a dialectical relationship between meaning and structure in awareness, and the separation of human experience

into referential and structural aspects, to identify the structure of the outcome space.

- The claim that awareness is inevitably partial and contextually variable, and the analytic search for the aspects of the phenomenon that are discerned and not discerned in awareness by the participants.

- The claim that awareness of different parts of a phenomenon combines to constitute a holistic experience, or understanding, of the phenomenon and part-whole analyses of different ways of experiencing a phenomenon.

- The assumption that human experience is non-dualistic and the analytic search for inclusive relationships between different ways of experiencing a phenomenon.

Adapted from (Åkerlind, 2025)

3.4.2 Phenomenographic Data and Analysis

Phenomenographic research begins with identifying the specific context and population the research question seeks to investigate. Phenomenographic research is context-bound, and as such, data generation needs to occur within the parameters of that context. Next, a pool of research participants is identified and invited to participate. As the outcome of phenomenographic research is the mapping of variation, it is crucial to have sufficient variation among the research participants selected to ensure a detailed description of the different ways the phenomenon is conceived. Data generation primarily involves semi-structured interviews with participants, in which the interviewer asks general questions related to the phenomenon being investigated, followed by follow-up questions that seek clarification and reflection from the participants. These interviews are recorded and transcribed in preparation for a five-stage phenomenographic analysis process (Mimirinis, 2019).

The first stage of phenomenographic analysis focuses on the individual interviews to ensure the accuracy of each transcript, allowing the researcher to gain a general understanding of the nuances of these interviews and support

the identification of meaningful utterances that may provide insight into the structure of faculty conceptions of curriculum. The second analysis stage aims to identify the limits of meaningful utterances, thereby creating a pool of meanings that consists of delimited statements extracted from individual transcripts. The third analysis stage involves an iterative reading of the delimited extracts, summarizing the focus of awareness for each statement, and then seeking to identify and group the statements based on similarities and differences in the identified focus of awareness. These groups are then assigned broad temporary labels that function as provisional categories of description. These categories of description represent quantitatively distinct conceptions relating to the phenomenon being studied. The fourth analysis stage involves iterative readings of the delimited statements within the context of the provisional categories of description, ensuring that these categories accurately represent the variation in conceptions described by the research participants. During this stage, delimited statements are reorganized across the categories of description to situate them where they are best aligned. During this realignment, categories of description may be combined, removed, or newly created to establish a logical and inclusive hierarchy among the qualitatively different categories. Throughout this analysis stage, the labels of the categories of description are reviewed and revised to ensure that they convincingly describe the conceptualizations presented in the interviews. In the fifth and final analysis stage, the researcher identifies the hierarchical structure of the outcome space of the conceptions. The categories of description are organized based on the referential and structural aspects that qualitatively distinguish each category of description. Once the outcome space is described, the researcher presents it along with the pool of meanings to other researchers to ensure that the categories of description and the outcome space are representative of the pool of meanings and that the organization of the outcome space is logical, with an inclusive and increasingly complex or sophisticated structure. The results of the phenomenographic analysis are then presented following the phenomenographic convention, which includes a graphical representation of the outcomes space and a tabular depiction of each category

of description in relation to the structural and referential aspects identified in the analysis.

3.5 Research Design Details

My research study involved interviewing instructional faculty teaching at polytechnic institutions in Alberta, Canada, during the 2023-2024 academic year. At this time, Alberta had four higher education institutions designated as polytechnics by the province's Ministry of Advanced Education (Government of Alberta, 2025). A fifth institution received this designation starting the following academic year, September 3, 2024 (Lethbridge Polytechnic, 2024). In Alberta, polytechnic institutions are mandated to provide classroom instruction as part of an apprenticeship education program, as well as offer certificates, diplomas, and undergraduate degrees in whole or in part. In providing undergraduate degree programming, polytechnics are also expected to undertake research and other scholarly activities that strengthen the province's economic development (Government of Alberta, 2025). These institutions offer industry-specific credentials, including certificates, diplomas, bachelor's degrees, and skilled trades apprenticeships across a wide variety of industries. This wide variety of programming necessitates institutions hiring faculty with diverse subject-matter expertise and a wide range of academic backgrounds.

3.5.1 Research Participants

As the aim of phenomenography is to identify the variation that exists in how people experience or conceive of phenomena, curriculum in the case of this study, rigour necessitates that variation exists across the research participants that is representative of the variation that exists in the population being researched (Åkerlind & Kayrooz, 2003; Marton & Booth, 1997). While the variation of research participants should be representative of the desired population, "there is no expectation that the frequency distribution of such demographic criteria within the sample will match the distribution within the population" (Åkerlind & Kayrooz, 2003, p. 331).

Therefore, to ensure as much variation as possible among the research participants, they were recruited from each of the four institutions, each taught

in a different subject and program area, and each of the four types of academic credentials was represented in the participant pool. I made one exception to this need for variation in the programs by including two instructors who taught in the same program area. This exception was made as one of the two instructors had an Indigenous background and taught a course that included indigenous ways of knowing and learning, which I believed would provide additional variation in the ways curriculum was conceptualized. In addition to seeking variation in the institution that the participants taught at, their associated program and subject area, and the program credential, the individual contexts of the research participants included variation in the academic credentials held by participants, their years of teaching experience, their age, their gender, and their cultural background. This variation in research participants is essential to ensure that all potential categories of description can be identified (Ashworth & Lucas, 2000).

In total, 18 faculty members participated in this research and were interviewed by me, as the sole researcher conducting this study. This total number of participants aligns with the typical number of participants interviewed in phenomenographic research, which usually ranges from 10 to 30 participants (Mimirinis & Ahlberg, 2021; Ojo et al., 2019; Tight, 2016; Trigwell, 2006). At the onset of my study, I aimed to recruit 3 to 5 participants from each of the four polytechnic institutions and each program credential type. Table 3.2 presents a comprehensive overview of the research participant diversity.

Research Participant	Polytechnic Institution	Program(s) Credential Type	Years of Teaching Experience	Academic Background	Gender	Cultural Background
RP 1	Pronghorn	Certificate Diploma	7	Master's	Non-Binary	Anglophone Canadian
RP 2	Wapiti	Degree	16	PhD	Female	Anglophone Canadian
RP 3	Caribou	Degree	18	Master's	Male	Anglophone Canadian
RP 4	Caribou	Diploma	25	PhD*	Female	Anglophone Canadian
RP 5	Wapiti	Degree	1.5	PhD	Male	Anglophone Canadian
RP 6	Wapiti	Skilled Trade Apprenticeship	5	Journeyperson Certificate	Male	Anglophone Canadian
RP 7	Moose	Diploma	5	Master's	Female	Anglophone

Research Participant	Polytechnic Institution	Program(s) Credential Type	Years of Teaching Experience	Academic Background	Gender	Cultural Background
		Degree				Canadian
RP 8	Pronghorn	Diploma	5	Diploma	Male	Anglophone Canadian
RP 9	Caribou	Certificate Diploma	8	PhD*	Female	Anglophone Canadian
RP 10	Pronghorn	Diploma	15	PhD	Male	West African
RP 11	Pronghorn	Certificate Diploma	<1	Certificate	Female	Anglophone Canadian
RP 12	Moose	Diploma Degree	23	EdD	Female	Anglophone Canadian
RP 13	Pronghorn	Skilled Trade Apprenticeship	7	Master's	Female	Anglophone Canadian
RP 14	Pronghorn	Diploma Degree	5	Master's	Male	South Asian-Indian
RP 15	Caribou	Skilled Trades Apprenticeship	13	Journeyperson Certificate	Male	Anglophone Canadian
RP 16	Caribou	Certificate Diploma	30	Master's	Female	Indigenous Francophone Canadian
RP 17	Pronghorn	Skilled Trade Apprenticeship	10	Diploma	Female	Anglophone Canadian
RP 18	Caribou	Certificate	2	Bachelor's	Female	Anglophone Canadian
						*in progress

Table 3.2 Research Participant Diversity

3.5.1.1 Ethical Considerations.

As with any research involving human participants, my study required ethical approval. Following the research ethics approval process at Lancaster University, I completed and submitted the Faculty of Arts and Social Sciences and Management School Research Ethics Committee (FASS-LUMS REC) ethics application form for staff and PhD students, receiving ethical approval to conduct my study on February 6, 2023 (see Appendix 1). As part of this application, I needed to identify potential ethical concerns and risks to the research participants. As the topic of study, curriculum, is not overtly controversial, nor is discussing it likely to cause emotional distress, I determined that the study posed no inherent risks to participants. In designing my study, I identified two potential ethical constraints that I needed to mitigate in

my research study: the anonymity of participants and the potential for a perceived power imbalance. The video recordings and transcripts of the web-based interviews were stored on a password-protected and encrypted external hard drive to ensure that others could not identify participants. Once the transcripts were verified, they were anonymized, and the video recordings were deleted to maintain participant anonymity. The corrected transcripts and analysis data will be stored for 10 years, in compliance with the General Data Protection Regulation and the UK Data Protection Act 2018. For participants from the institution where I teach, I was cognizant of a potential perceived power imbalance between faculty whom I had instructed and coached as part of their development as instructors. While I, too, am a faculty member and therefore do not have authority over other instructors, I did not want my colleagues to feel obligated to participate in the research study. To mitigate this, I only contacted faculty with whom I did not have a close professional relationship.

In addition to the steps outlined above, I also ensured that I received informed consent from the participants at the start of their recorded interviews following Lancaster University's Verbal Consent Protocol (see Appendix 2).

3.5.1.2 Research Participant Recruitment.

I employed several approaches to recruiting participants for my study due to the constraint of not having access to contact information, specifically e-mail addresses, for all faculty at each institution. The only institution where I could access this information was where I work; the others either had potentially incomplete faculty profile pages on their websites or had no publicly available faculty information. I considered the faculty profiles on the institutional websites to be potentially incomplete due to the number of temporary, casual, or adjunct faculty members employed at my institution and throughout Alberta's entire higher education sector.

To mitigate this constraint, I used the following approaches. Within my institution, I reviewed the employee directory and identified potential participants who met the variation I sought in my research participant pool. I

intentionally did not identify potential participants with whom I had had a close working relationship or whom I had instructed as part of my institution's foundational teaching development courses. For the two institutions that had faculty profile web pages, I identified instructors from each program listed to contact. For one of these two institutions, I had a professional connection to an educational development colleague whom I asked, and they agreed to send my research participant invitation email to faculty that they felt would be willing to participate. I had no professional relationships at the other institution to leverage to find participants. I again contacted an educational developer colleague for the final institution, which did not have public faculty information, to help distribute my invitation email.

Once I had identified potential research participants, I sent them an email invitation to participate (see Appendix 3). To ensure that I followed the research ethics principle of informed consent, I attached a Participant Information Sheet (Appendix 4) that outlined the purpose of the study and explained what was required from the participants. It further explained that they had the autonomy to choose whether to participate or not, as well as their right to withdraw from the study and have their interview transcript deleted within four weeks of participating in the interview. It was explained that after this time, select statements from their interview would be added to the pool of statements from other participants, and it would no longer be possible to identify and delete them easily. Lastly, the information sheet outlined the steps that would be taken to ensure their anonymity and to store the data generated during the study securely.

While my colleagues at the other institutions did not provide me with the number of faculty to whom they sent my invitation, I emailed 162 faculty members, of whom 18 agreed to participate in the research.

3.5.2 Data Generation: Semi-Structured Interviews

As I mentioned previously, phenomenographic research employs interviews as the primary source of data (Åkerlind, 2012). As such, I conducted semi-structured interviews to gather the data that I would later analyze. Given the

geographic distance between the polytechnic institutions, which ranged from 140 km to 710 km from my residence, the interviews were conducted using Zoom, a web-based videoconferencing platform. This platform was selected as I already had a software license for its use, and it allowed the interviews to be recorded, automatically transcribed, and saved directly to my secure laptop. Furthermore, Zoom can export both the audio of the recording as an MP4 audio file and the transcript as a Microsoft Word file, making it easier to import into qualitative analysis software.

In preparation for the interviews, I developed an interview guide (see Appendix 5) to outline the topics to be covered during the interviews and exemplar questions that I could use if needed (Brinkmann & Kvale, 2015). Each interview prompt was directly related to my primary research questions, ensuring that I gathered the necessary data to conduct my analysis. To verify that the interview questions could generate the necessary data to answer my research questions, I conducted a pilot interview to test them. The pilot interview served two purposes: first, to validate the effectiveness of my interview guide, and secondly, to provide an opportunity to practice my qualitative interview technique. For the pilot interview, I recruited one of my educational developer colleagues and interviewed them like I would one of my participants. After completing the interview, I debriefed the experience with my colleague, seeking feedback on my demeanour during the interview, the pace of my questioning to ensure they had sufficient time to think about their response, whether or not my questioning pressure them towards a response that echoed what they thought I wanted to hear from them. The principal feedback I received from my colleague was to provide more time for them to think, reflect, and consider their responses.

I intentionally waited for just over a week before listening to the recording of the pilot interview to give myself some cognitive distance and remove the immediacy of the experience, all to critically review my interview skills and compare the feedback I received from my colleague with my evaluation of how the interview went. Upon reflection, several areas of improvement were noted. First, I did not provide sufficient time for the participant to think before

responding to my questions, often restating and clarifying my question before my colleague had started to answer. The next improvement area I noted was that I needed to ensure that my follow-up questions were more closely connected to the goals and intentions for the interview, as several of my follow-up questions were tangential to what I needed to explore to answer my research questions or were too focused on the curriculum processes mentioned by my colleague and not on how they perceived or experienced curriculum. Lastly, I noted that I could improve the interview pacing by slowing down, listening more intently to the answers given, and allowing the interview to progress more organically, so as not to try and push through all my interview questions. As I listened to the recording a second time to verify the identified areas of improvement were accurate, I also reflected on the questions I asked from my interview guide, identifying questions that I did not fully align with the intended goals of the interview and did not provide meaningful data. This led to rephrasing two questions and removing three that did not yield useful data.

Once my interview guide was complete, I conducted interviews with research participants. These in-depth interviews ranged from 40 to 60 minutes and were conducted between June 2023 and March 2024. The interviews were conducted in staggered groups over this period to accommodate participant availability, to allow me time to reflect on each interview and adapt my interview skills as needed (Ashworth & Lucas, 2000), and to undertake the initial iterations of phenomenographic analysis. This was critical for me, as a novice interviewer, developing my skill set with each interview. Additionally, it limited the data I was analyzing to avoid becoming overwhelmed as a novice phenomenographic researcher. I will discuss my phenomenographic analysis in greater detail later in this chapter.

Each interview was conducted using a semi-structured yet open approach that thoroughly explored each participant's thoughts and allowed them to clarify their experiences (Åkerlind, 2003; Ashworth & Lucas, 2000). My use of unstructured follow-up questions enabled the participants to reflect on and elaborate on their previous statements. This allowed the interview to reach a point where no other ways of experiencing or conceptualizing curriculum could be discovered

(Åkerlind, 2012). During each interview, I took care to reflect and use the interviewee's language when discussing various aspects that could be related to the curriculum. This was done to mitigate the issue that I identified in Chapter 2 of the prior phenomenographic study of faculty conceptions conducted by Fraser and Bosanquet (2006), whereby the interviewer asked specifically about curriculum at the start of the interview, which may have influenced the participants in expressing a narrower view of curriculum in the remainder of the interview. Therefore, unless the interviewee used the term curriculum, I did not use it until my final interview question, which was:

> *We have spent a significant amount of time discussing what is taught within the specific context of your program. I'd like to step back and ask you a question from a broader perspective. Reflecting back on our conversation, **in your own words, what is curriculum**?*

My intention in asking this final interview question was for the interviewee to provide an explicit expression of their conceptions of curriculum instead of the implicit ones that I would identify during data analysis. Comparing the two types of statements resulted in an unexpected research outcome that I describe in the following chapter.

3.6 Phenomenographic Data Analysis

The use of phenomenographic methodologies allowed me to analyze the data, identify the variation present in the conceptions of curriculum held by faculty, and provided a way to communicate them in a logical and structured manner. Marton (1994) explains,

> *The aim of phenomenography is to take these differing experiences, understandings, and characterise them: in terms of `categories of description', logically related to each other, and forming hierarchies in relation to given criteria. Such an ordered set of categories of description is called the `outcome space' of the phenomenon concept in question. (p. 4424)*

As an iterative process, phenomenographic analysis is "a continual process of iterating between a focus on parts and on wholes" (Åkerlind, 2005, p. 120), resulting in the identification of the qualitatively distinct categories of description as they 'emerge' from the data with each iteration. As such, I began phenomenographic analysis of the interview data after completing my first five interviews. As a new phenomenographic researcher, this allowed me to refine my analysis techniques as I analyzed additional groups of transcripts in subsequent iterations. Additionally, analyzing smaller groupings of transcripts helped me manage the large volumes of data collected. Including the group comprising my first five interviews, I analyzed the transcripts in five groups, with two to five interview transcripts in each analysis group.

To conduct a rigorous analysis of the interview data, I applied and adapted the phenomenographic analysis process described by Mimirinis (2019). I provided an overview of this five-stage process earlier in the chapter. In the following sections, I will outline my approach and rationale for each of the five stages of analysis.

3.6.1 Bracketing

Before I outline each stage of my analysis, I need to address a key mindset necessary when conducting phenomenographic analysis: the necessity for the researcher to bracket their preconceptions related to the phenomenon being examined. It is critical in phenomenography that categories of description are not predetermined or influenced by my presumptions (Åkerlind, 2012; Ashworth & Lucas, 2000). As such, I consciously bracketed my presumptions and preconceptions while reading the transcripts, with the goal being that the participants' descriptions of their experiences are not misidentified or misclassified but are grounded in their lived experiences (Ashworth & Lucas, 2000). The presumptions that I was conscious of needing to be bracketed are:

- importing earlier research findings
- assuming pre-given theoretical structures or particular interpretations
- presupposing my personal knowledge and belief

- assuming, prior to acquaintance with the nature of the experience itself, specific research techniques. Assumptions built into the techniques (such as the assumptions of rating scales) tend to bend the data found using those techniques to a particular form, which may be incommensurate with the aim of securing clarity concerning participant experience

- potential concern is to uncover the `cause' of certain forms of participant experience. Doubtless, the research participant's assumptions about the `causes' of their experience (which have no bearing on the question of the `real cause' of the experience) might be a valuable aspect of the meaning of the experience for them and should be carefully heard by the researcher. Yet, it would be a distortion to import the researcher's notions of cause-and-effect into the description of the experience.

Adapted from: Ashworth & Lucas, 2000, p. 298

By taking a bracketed approach to the data analysis, I sought to limit research bias or influence in identifying the categories. As a novice researcher, I used the transcript of my pilot interview to pilot data analysis to gain experience before beginning formal coding and data analysis of the participant interview transcripts.

3.6.2 Stage 1 - Identifying Meaningful Utterances

The first stage of analysis involved reading each transcript while listening to its audio file to ensure the accuracy of the transcript and correcting any errors (Mimirinis, 2019). To facilitate this stage, I used the qualitative analysis software ATLAS.ti, enabling me to read and edit the transcript while listening to the interview recording within a single software platform. ATLAS.ti has the functionality to import the complete video file, not just the audio. However, I chose not to do this to avoid the video distracting me as I focused on reading the transcript while listening to the audio. Additionally, ATLAS.ti allowed me to slow down the playback speed, pause, and rewind the recording, making it easier to verify the accuracy of the transcript. After importing the audio and

transcript files for the interviews, I verified the transcript and made any necessary corrections. This was an important step as the auto-transcription generated by Zoom had frequent errors. While reviewing the initial group of transcripts, I determined that playing them back at 75% speed made it easiest for me to listen and correct them. I reviewed each transcript twice, listening to the audio, to verify its accuracy. First, I made corrections as needed, then revalidated that I had accurately captured the interview.

Once the transcripts were validated, I began the analysis process with each transcript separately. I read them twice to understand the nuances of each better. Having a sense of the nuance of the interview, I reread the transcripts searching for meaning, or variation in meaning, across the transcripts, highlighting what I considered to be meaningful utterances related to curriculum that could potentially reveal various aspects of the conceptions' structure (Åkerlind, 2012; Mimirinis, 2019).

Each step involved in this analysis stage was completed independently for each transcript, based on when the interview was completed, regardless of which of the five transcript groups was being analyzed. This helped me manage the amount of data I was analyzing.

3.6.3 Stage 2 - Constructing a Pool of Meanings

In the second analysis stage, I determined the limits of each meaningful utterance to identify precisely how much of the remaining transcript should be considered for further analysis (Åkerlind, 2012; Mimirinis, 2019). This involved multiple readings of the transcripts, focusing on the utterances directly related to how faculty experience curriculum in general and not in relation to the subjects they teach, while maintaining an openness to discovering new interpretations of the highlighted statements (Åkerlind, 2012). Using the 'track changes' function in Microsoft Word, I deleted the parts of the transcript that were unrelated to curriculum or what the learners are learning. My reasoning was twofold. Firstly, deleting the irrelevant sections of the transcript reduced the amount of text I had to read, allowing me to focus only on the meaningful statements made by the interviewee. Secondly, using the track-changes

function allowed for me to delete the irrelevant sections, but not lose them as I could change how I viewed the Word document to show the deleted sections, preserving them in case I decided that I needed to return to the transcripts later to better understand the context of the statement that I had highlighted. If, during my subsequent reading, I was unsure whether a statement was meaningful, I retained it in the transcript without highlighting it. These non-highlighted statements were included in the meaningful utterances to ensure I did not prematurely eliminate potential conceptions.

Once the exact limits of the meaningful utterances were identified, they were compiled together, removing them from the context of the individual interviews and creating a pool of meanings from which the structure of the conceptions of curriculum could be identified (Åkerlind, 2005; Mimirinis, 2019). By decontextualizing the utterances, I holistically analyzed the entirety of the conceptions of curriculum outcome space. As interviewees expressed multiple meanings or conceptualizations of curriculum in their interviews, removing the context of the individual interview allowed me to focus on each meaningful utterance as a unique and distinct expression (Åkerlind, 2005). Once included in the delimited pool of meanings, the meaningful utterances were reread. Using the 'comments' function of Microsoft Word, I summarized the general intention of each utterance as it related to curriculum to facilitate further analysis.

After analyzing the initial group of five transcripts, I proceeded to the next analysis stage, identifying and writing provisional categories of description. This analysis stage for each subsequent group of transcript data was not started until after the previous group's data had been analyzed and the categories of description refined.

3.6.4 Stage 3 - Writing Provisional Categories of Description

In the next analysis stage, I exported the delimited statements and associated comments that composed the pool of meanings from Microsoft Word into a spreadsheet in Microsoft Excel. Analysis at this stage involved iterative readings in which I examined the data individually and collectively, looking for

"similarities and differences *between* and *within"* (Mimirinis, 2019, p. 238), from which I identified provisional categories of description, giving each a broad conceptual label and drafting general descriptions of each based on the common general intentions of similar meaningful utterances. These labels were then used as column headings in the spreadsheet into which I sorted the related delimited statements and associated intention summaries. Figure 3.1 provides an extract of the Excel spreadsheet after the utterances were initially sorted. During each iterative reading, I questioned whether the meaningful utterance belonged in its associated category and whether the categories and descriptions accurately represented the identified conceptions.

As the final aim of my phenomenographic analysis is to identify an inclusive and hierarchical outcome space of the ways in which faculty conceptualize curriculum, the preliminary categories of description were then organized into a logical hierarchical order of increasing complexity. This was achieved through iterative readings of the general intentions columns included in the category, identifying groups of similar intentions within the column and assigning labels to these groups. I chose to do this to avoid being overwhelmed by the amount of data. Once these sub-classifications of general intentions were created, I used Microsoft Whiteboard, a web-based software that enabled me to create movable digital notes in different colours. Each category of description was given dedicated space on the whiteboard and assigned a different colour. Then, each sub-category of general intentions was written on individual notes that were the same colour as the category of description. The placement of each general intention in relation to the categories of description was reassessed and reorganized to ensure that it was aligned with the category that best fit the intention. Any general intentions that did not fit into a category had their notes placed off to the side on the whiteboard and were included in a separate column in the spreadsheet, but not deleted, in case future iterations of analysis identified new categories to which they could belong. The categories of description were then ordered based on the overall complexity of the general intentions listed within them. I provide an example of the whiteboard at the end of an iteration in Figure 3.2.

2nd Faculty Conception of Curriculum		3rd Faculty Conception of Curriculum		
Curriculum is the knowledge & skills that are identified by subject matter experts that faculty (as subject matter experts) have to teach & that students need to learn in a course to prepare students to enter the industry.		Curriculum is the industry-specific knowledge & skills that have been identified by subject-matter experts and are documented and expressed in formal institutional, government, and/or accrediting bodies documentation that faculty are accountable (to their institution/another institution/accrediting body) for teaching & assessing in specific ways within a course.		Curricul… studer…
Extract's General Conception	Extracted Statement	Extract's General Conception	Extracted Statement	Extract…
Curriculum is learning applied skills, not just memorizing theory.	And that's one of the reasons I really like working at Polytech's is that it's very much about learning the skills so you can actually do something and not just memorizing theory because my brain doesn't work quite as well that way either. (RP1)	Curriculum documents keep instructors accountable.	Yeah, I think it's something that keeps us accountable as instructors. And it says, "Oh, did we meet this." I mean, it's a way of designing the course, really, because you know, I mean, we do outcomes-based design. And so it's, you know you, you set out your outcomes, you create assessments that are to measure those outcomes, right. So I mean, that's where the and then, you know, if you're doing that analysis, you can say, "Okay, did I? Did I actually help students meet these?" (RP4)	Course outli…
Also teach insights gained through instructor experience.	No. (laughing) I think about, um, really insightful things that I learned when I was getting into data visualization and errors and mistakes that I commonly see. So it's a bit of like what I've seen in industry. (RP1)	Curriculum includes formal work-integrated learning as well as simulated work-place learning.	So with each practical, like a clinical placement, so the students go to practice on a surgical ward. And they would they would have a lab attached to that course, so they will learn about how to take somebody's blood pressure, how to give them needles, how to give them a catheter, how to collect different samples. That's what the labs are about. A simulation we actually have here at NWP. We have 4 simulation rooms complete with mannequins and models. And so we are able to set up a mannequin so that it could be a surgical patient in a room who needs to have a catheter inserted who may also have something else, has to have a dressing change because they just had a hip repair done. And so the students are broken into groups and are given pieces of scenarios where they're allowed to go in and pretend that this is their person. They are the nurse. They have to interact with the mannequin and the mannequin interacts with them. (RP2)	Course outli…
Curriculum includes the acquisition of terminology and language used in industry. Curriculum is the application of knowledge and skills using the same tools as used in industry.	In terms of dividing that time, for data visualization, um, I kind of treated it almost as like we're walking through a project. So, at the beginning it was a lot of just terminology and what is data visualization? What are these different types of charts? Why are there so many different types of charts and colour and the kind of the design pieces? And then once we had more of the theoretical foundational ideas and best practices then it was, okay, let's introduce Tableau. Let's see how we can actually apply this. How we can create things that follow these best practices and let's use this to explore our data sets and get comfortable with our data sets. Okay, let's make it more complicated now and then okay, now we're at the end of the project. How are you presenting that back and kind of trying to build it to mirror what they'd actually be doing in a career, like an industry environment? (RP1)	Curriculum replicates processes and practices in the industry. Curriculum develops an understanding of industry processes.	I'll, yeah, try to think of an example. [Pause] So I think we try to do a lot of, kind of, I guess backwards, backwards design a little bit. So I'll show, you know, I'll show our students the finished product, right. So here's a sequence. Here's 30 seconds from the new Mario Brothers movie or something, right. And let's watch that. Now let's try to break it down. And how can we trace that all the way back to what we're doing here, which is that simple design? Right. So let's just take that one object. All right. What do you think the very first idea of that object was about? Right. Let's try to break it down. Okay, there's 15 characters, and there's 8 buildings and 16 mushrooms. All right, let's break those down. What, you know what do you think went into the environment design? Right. So let's look at architecture and let's look at perspective, right. Character design, you know how realistic are these? Is there any sort of anatomy that's attached to it, either real or imaginary. And what about the props? Right are these, again, are these real world designs? But are they stylized or they photo realistic? So we do a lot of that. Like you, I know you want to get here, right, to what shows up on the movie screen. How do we? How do we actually support that? What do you think the first version of that was? If this, if you had to pitch this scene we just looked at on a napkin, right like, if you're trying to convince someone, hey, this is the scene should be in a movie, and you had a napkin and a pen, what would you, what's the version of the shorthand you could do? (RP3)	Learners s… ways that c… types of i…
Curriculum includes terminology to create	And things like quizzes are going to be to make sure that they've got the terminology and the language and the fundamental pieces because we		They don't actually design anything, cause they don't know enough to design anything. It's more painting a picture of the thought process that goes into a design. So the fact that typically companies will have a request for a proposal, like work doesn't just show up at your door. Usually companies will put out bids, like you have to bid on a project. And so what does that mean? Well, you've got to read what the client wants. You	

Figure 3.1 Extract of Excel Spreadsheet Used in the First Iteration of Analysis

56
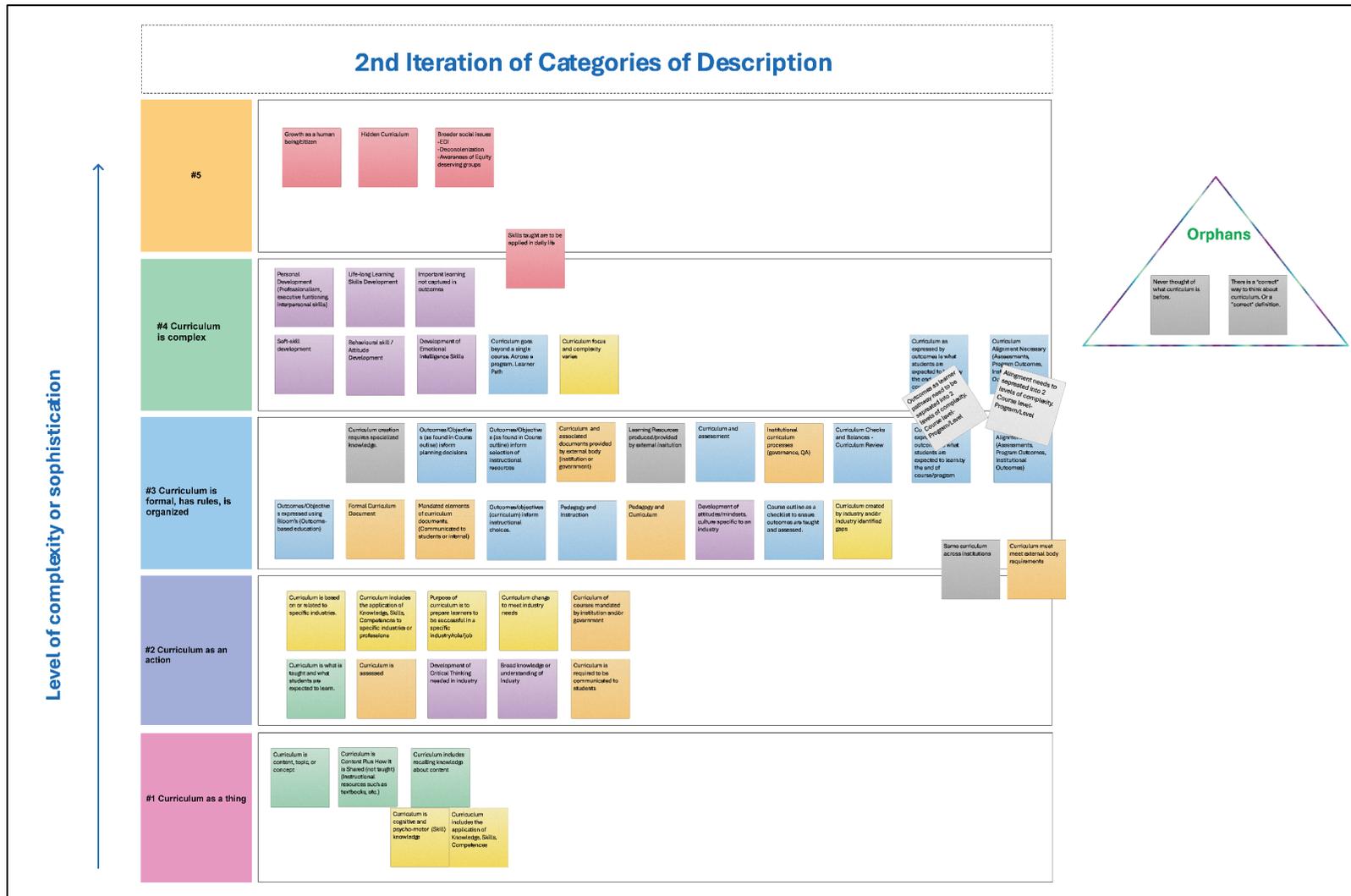
Figure 3.2 Example of Microsoft Whiteboard at the End of the Second Iteration of Analysis

After the provisional categories were written and described using the data from the first transcript group, I returned to begin the second analysis stage for the second group's transcripts. The delimited utterances and the descriptions of their intentions were then copied into blank columns in the Excel spreadsheet. This data was then analyzed using the same process as described above. As provisional categories already existed, they did not need to be recreated. Instead, I proceeded to the next stage of analysis. This process of analysis continued with each of the remaining transcript groups.

3.6.5 Stage 4 - Refining the Categories of Description

With each subsequent data set from the four remaining transcript groups added to the pool of meanings and sorted into the Excel spreadsheet, the next stage of analysis involved iterative readings of the delimited statements, sorting them into the existing categories of description, reviewing the statements that did not fit into an existing category, deleting those that were determined to not be part of the developing outcome space, creating new categories and where needed removing categories, and either redistributing the associated statements into the new categories or deleting them. To facilitate this and manage the increasing amounts of data, I again sorted the statements into subgroups of similar intentions, using the existing Microsoft Whiteboard to create coloured notes with the subgroup titles. The collection of sub-groups was then sorted and organized hierarchically, and new categories of description were identified.

Examples of the types of delimited statements removed from the pool of meanings at this stage included statements related to program length, statements related to the different credentials earned within a program, and statements related to instructor expectations of learners. Categories removed in their entirety included faculty perceptions of their role in relation to curriculum development and renewal, faculty experiences with mandated institutional curriculum processes, faculty perceptions of curriculum as a specialized subject matter, and perceptions of how students view or experience curriculum.

After each iteration of analysis and revision of the categories of description, I reread the delimited statements associated with each category of description to

gain a high-level awareness of the unique qualitative aspects of each category. Afterward, I used a table in Word to describe the qualitative differences between the categories. These descriptions served two purposes. Firstly, they provided a way of reviewing the developing outcome space as a whole instead of the detailed view provided by the data. Secondly, these descriptions helped me understand the variation that exists across the outcome space.

This iterative review of the categories of description, their structure, and the associated delimited statements with their identified general intentions continued as each of the five transcript groups' data was added. Once all of the transcript data had been added to the pool of meanings, analyzed, and sorted, this analysis stage continued. With each critical review I questioned to see if the categories accurately represent the experiences and conceptions described by the instructional faculty as found in the data; are the categories related to each other in a logical and inclusive hierarchical structure as evident in the data; and lastly, did the label that I had assigned to each category of description accurately and realistically represent the faculty members accounts of curriculum provided in the interviews (Mimirinis, 2019).

I completed ten iterations of analysis to establish the final outcome space and its categories of description. I present an extract of the final iteration's Excel spreadsheet and Whiteboard in Figures 3.3 and 3.4, respectively.

3.6.6 Stage 5 - Identifying the Structure of the Outcome Space

My final stage of analysis aimed to identify the structure of the outcome space (Mimirinis, 2019). As with the other analysis stages, this was an iterative process. The first iteration occurred after I had completed the seventh iteration of the categories of description. Each conception of curriculum, as described in the categories of description, is composed of two intertwined aspects: a referential aspect and a structural aspect (Marton & Pong, 2005). The structural aspect is what is at the foreground of the expressed conceptions regarding curriculum, or perhaps more easily understood as "the combination of features

Figure 3.3 Extract of Final Iteration of Analysis
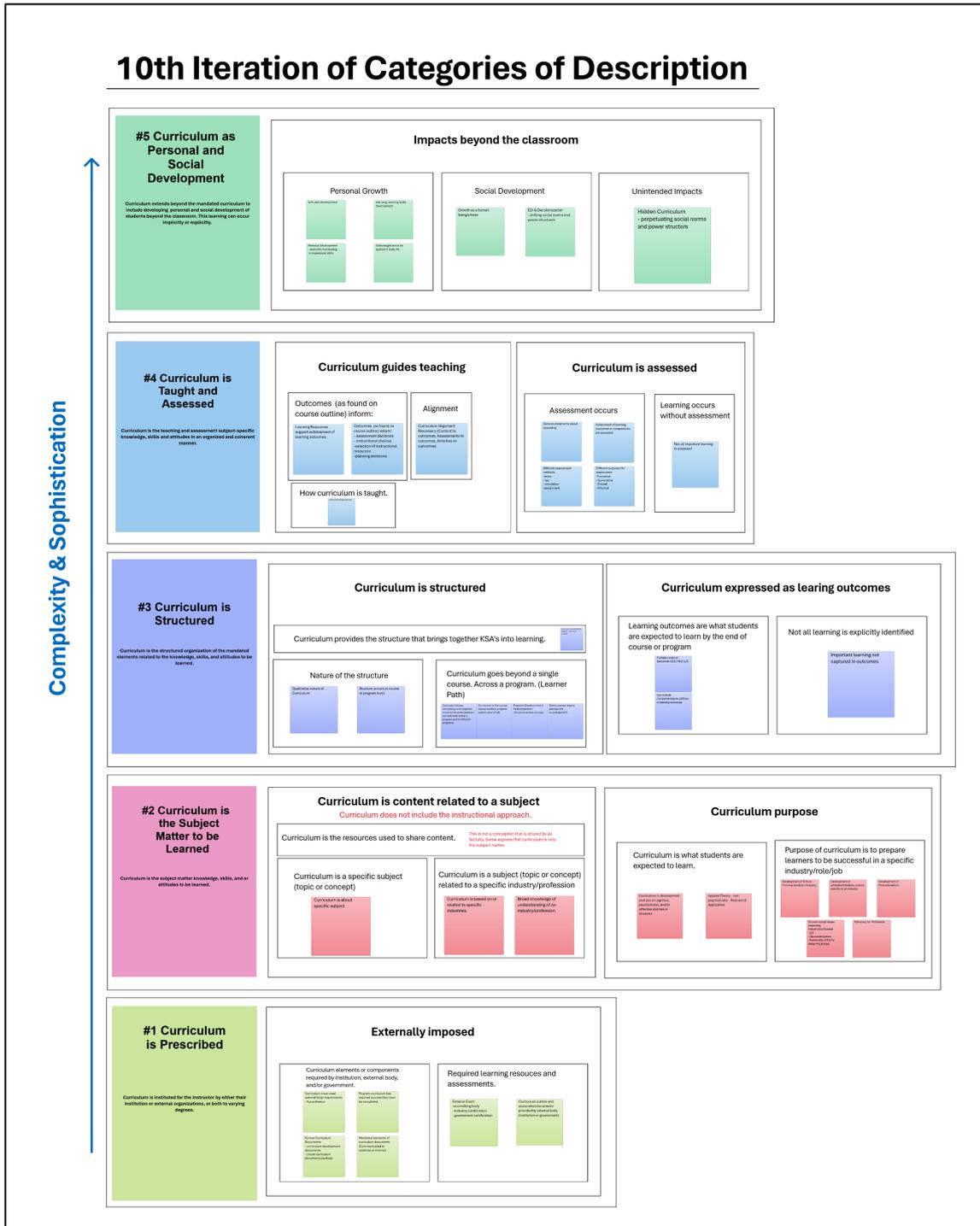
Figure 3.4 Final Microsoft Whiteboard Used During Analysis

aspect is what is at the foreground of the expressed conceptions regarding curriculum, or perhaps more easily understood as "the combination of features discerned and focused upon by the [interviewee]" (Marton & Pong, 2005, p. 336). The referential aspect is the global meaning of the conception or the 'what' that is being spoken about within the conception (Marton & Pong, 2005).

Each of the categories of description can be hierarchically situated within the outcome space by examining the distinct structural and referential aspects of the outcome space. It is within this inclusive hierarchy that the variation between categories becomes the focus of phenomenography and not the categories themselves (Ashwin et al., 2016). With each iteration of the analysis, I reviewed the revised categories of description in relation to the existing structural and referential aspect hierarchy, questioning if the labels for each aspect accurately represented the conceptions. Throughout each iteration, I was open to different interpretations and relationships between the categories of description. Figure 3.5 provides an extract of the iterations of the outcome space's structure in terms of the referential and structural aspects. The final structure of the outcome space, including a visual representation, is provided in Chapter 4.

Identified during 7th iteration:

Structural Aspects (Foreground of the conception)	Referential Aspects (Global meaning of curriculum – the 'what' of the conception)				
	Topic or Subject	As an Object	Purposeful Action	Specialized Knowledge	Beyond the formalized curriculum.
Industry or Profession	1				
Regulated or Mandated	2	2			
Structure		3	3		
Teaching and Learning			4	4	5

Identified during 8th iteration:

Instructor conceptions of curriculum

Structural Aspects (Foreground of the conception)	Referential Aspects (Global meaning of curriculum – the 'what' of the conception)			
	Learning Knowledge, Skills, & Attitudes	Mandated Elements	Teaching & Assessments	Personal and Social Development
Subject	1	2		
Coherence		3	4	
Student				5

Figure 3.5 Extract of the Iterative Identification of the Structure of the Outcome Space

3.7 Rigour in Phenomenographic Research

As an interpretive qualitative research methodology, the issues of quality and robustness in my research are best addressed through a discussion of two interconnected aspects: the 'trustworthiness' of the research process and the 'credibility' of the generated research outcomes (Åkerlind, 2025). I have taken

several steps to develop trustworthiness in my research process. The first being my use of an established research methodology, phenomenography, which has been shown effective in answering similar research questions, that is, questions relating to the variation present within a population in how they experience, understand, or conceptualize phenomena. Additionally, I have approached all stages of my research with an awareness of my relationship with curriculum, the research participants, and the data. Given my academic background, holding a Bachelor of Education in Elementary Education and a Master of Education in Curriculum, Teaching, and Learning, I have spent many years gaining a deep knowledge of curriculum in varying contexts. I also have over fourteen years of experience supporting faculty in developing and teaching courses at my polytechnic institution. As such, I entered this research study having my own understandings and interpretations of curriculum within the context of polytechnic institutions. Due to this positionality, as a researcher, I have mitigated the potential impacts of my relationality on my interpretations of the research and the final research outcomes, demonstrating the interpretive awareness necessary to demonstrate trustworthiness in my research process (Åkerlind, 2025). These mitigation strategies have included keeping a detailed research journal to document key decisions and my rationale for my choices, remaining open to different interpretations of the data, actively questioning my results with each iteration of analysis to identify and challenge any assumptions I may be making (i.e. acting as my own devil's advocate).

I already discussed one critical mitigation that I took at the beginning of this section: bracketing. By conscious awareness of my interpretations and putting them 'off to the side' during my interviews and data analysis, I endeavoured to capture and represent the intentions of the research participants rather than my own. While I made every effort to bracket my understandings effectively, I am also aware of the potential issues related to bracketing. As Åkerlind (2025) states,

> *There is the need to acknowledge that complete bracketing of one's own prior experience and assumptions is, of course, impossible— especially within phenomenography's epistemological assumption of*

> *relationality …. Then, there is a need to describe the process by which one has attempted to achieve bracketing. (2025, p. 173)*

Therefore, I have striven to be transparent in reporting the steps I took to bracket my experiences and all aspects of my research design. Additionally, with each iteration of the analysis, I sent the data and my interpretations to my PhD supervisor, an experienced phenomenographic researcher, to determine if my outcome space was organized in a consistent and logical manner. By doing so, I sought to increase the trustworthiness and credibility of my outcomes and work towards dialogic reliability or dialogic consensus (Åkerlind, 2025). Lastly, I have reported my research outcomes using the conventions commonly found in phenomenographic research, ensuring 'communicative validity' (Brinkmann & Kvale, 2015) or 'communicative credibility' (Åkerlind, 2025).

The credibility of my phenomenographic research outcomes can be assessed by examining the final detailed outcome space, which demonstrates "a meaningful pattern to the data that is coherent, internally consistent and empirically supported" (Åkerlind, 2025, p. 175). Therefore, the credibility of my research outcomes is evident in that within my outcome space, each category of description details a distinct way of understanding curriculum, each of the categories are logically situated within the inclusive and hierarchical structure of the outcome space, and the variation of conceptions present in the data are represented in as few categories as possible, that is to say, I have identified the limits of each category.

3.8 Comparative Analysis Methods

Once the phenomenographic analysis was complete, I returned to the delimited statements made by the research participants. I identified the category of description that best aligned with each conception expressed during the interview. To accomplish this, I copied the expressed statements into Microsoft Excel, allocating a separate spreadsheet for each participant. This allowed me to easily list the expressions in one column and the most closely associated category of description in the next column. After assessing each expressed statement, I used the 'sort' function within Excel to order both columns in

numerical order based on the number of the associated category of description (1-5), allowing me to identify the highest level of conception expressed by each participant.

To answer my second research question, I created two tables to compare the highest level of conception expressed by the participants and the two different characteristics of the participants: their academic background and their number of years of teaching experience. These results are presented in Table 4.3 and Table 4.4.

To answer my third research question, I returned to the individual interview transcripts and extracted the participant responses to my final interview question, in which they were asked to provide a prescriptive definition of curriculum. These extracted responses were copied into Excel and then analyzed to identify the categories of description that best aligned with the different conceptions expressed in response to the question. These were again sorted in Excel into numerical order. Next, I copied the ordered expressed statements and associated categories of description generated during the analysis to answer my second research question two analysis, into the new spreadsheets. The expressed statements in response to the final question were then deleted from the copied statements column. This allowed me to identify the highest level of conception expressed in both sets of statements. From this, I created a table that compared the highest expressed conceptions to both the general and final interview questions. The results are presented in Table 4.5.

After reviewing the results in Table 4.5, I returned to the research data to identify potential factors that may account for the results of this comparative analysis. This exploratory search involved re-reading the prescriptive responses to the final interview question, the interview transcripts, the delimited statements within each category of description, and the delimited statements within the categories of description that I had removed from the outcome space (as described in Section 3.6.5). As I re-examined each of these documents, I noticed two factors that may account for the differences. These two factors are outlined in the following chapter.

3.9 Chapter Summary

In summary, this chapter described the design and methodological approaches I used to investigate and answer my research questions. I began the chapter with an overview of my research design. This was followed by my explanation for selecting phenomenography as the methodology best suited to answer my research questions. This explanation included phenomenography's ontological and epistemological perspectives as they related to answering the research questions. I then provided a detailed explanation of my research design, including a description of the ethical considerations that I took into account, the methods I used to recruit research participants, and the use of semi-structured interviews as the data-gathering method for the study. Next, I described my data analysis methods, explaining how decisions were made at each stage. Following this, I outlined the steps taken during the study to ensure that my research had the appropriate rigour, as demonstrated by its trustworthiness and credibility. I closed the chapter by explaining the data analysis methods used to answer my second and third research questions.

In Chapter 4: Research Outcomes, I will present my research outcomes, which in turn, answer my three research questions. The answer to my first research question is demonstrated through the presentation of the phenomenographic outcome space that constitutes the structure and variation of the ways in which instructional faculty experience or conceptualize curriculum. The answer to my second research question is presented using a comparative analysis of the conceptions that align with the expressed statements made by faculty during their interviews and their academic background, as well as their number of years of teaching experience. My third research question is answered using a comparative analysis of the prescriptive and descriptive accounts of curriculum identified in the interview transcript. Additional analysis of the data is used to identify potential factors that account for the differences between descriptive and prescriptive accounts of curriculum, and to identify the relationship between the completion of educator professional development, the use of educational terminology, and adoption of more complex conceptions of curriculum.

Chapter 4: Research Outcomes

4.1 Introduction

In this chapter, I detail the research outcomes generated from analyzing the data extracted from the 18 interviews conducted across four polytechnics, using the methods outlined in the previous chapter.

To answer my initial research question, I describe the outcome space relating to polytechnic faculty conceptions of curriculum identified during the phenomenographic analysis. I present the referential and structural aspects of the outcome space and how they situate the categories of description therein. One of the key strengths of phenomenography is the variation present within the outcome space. As such, the variation identified in this analysis is described as it relates to qualitative differences between the categories of description.

After completing the primary phenomenographic analysis, a second analysis was conducted to answer my second research question. This question seeks to explore the potential relationship between a faculty member's academic background or teaching experience and the level of conceptualization that they expressed during the interviews. These findings are presented in the following sections.

Lastly, this chapter presents the findings of an unanticipated outcome that emerged during the analysis. While reviewing the level of conceptualization expressed by faculty, there appeared to be a difference between faculty conceptualizations of curriculum that were expressed when participants were explicitly asked to describe curriculum and the conceptions that were expressed earlier in the interviews when the faculty participants were responding to questions about their program, courses, students, and their personal goals as it relates to their students. Returning to the data to identify potential factors that might account for this difference, I present two additional categories of description identified during my phenomenographic analysis that were ultimately excluded from the final outcome space. While these two categories were determined to be external to the outcome space, they provide insight into potential influencing factors that may account for the identified differences. In

returning to the data, I also identify a relationship between the completion of educator professional development, the use of educational language, and the adoption of more complex conceptions of curriculum.

Throughout this chapter, I include select quotations from the research interviews to better describe the concepts presented. It is important to note that phenomenography aims to describe the variation of the conceptions held by a context-specific population in relation to a phenomenon. As such, statements made by individuals may not represent the entirety of the conception presented but are selected and presented as they best represent the conception or perception being presented.

4.2 Faculty Conceptualizations of Curriculum: Identifying the Outcome Space

The phenomenographic analysis described in Chapter 3 resulted in a focused and structured outcome space, informed by the delimited statements, wherein the variation of conceptions of curriculum held by faculty at polytechnics in Alberta, Canada. These conceptions are described within a hierarchical and expanding series of five categories of description that increase in complexity and sophistication and are inclusive of the lower categories. That is to say, each category of description includes the category below it. Thus, the fifth and highest category of description includes all aspects of curriculum described in the other four lower categories.

The outcome space identified in my phenomenographic analysis is composed of the following categories of description:

1. Curriculum is Prescribed
2. Curriculum is the Subject Matter to be Learned
3. Curriculum is Organized and Structured
4. Curriculum is Taught and Assessed
5. Curriculum as Personal and Social Development

Due to the non-dualist nature of phenomenographic research, this outcome space results from my interpretations of the data identified and used in the

analysis. As such, it is possible that another researcher, given the same data, could identify a different yet equally valid outcome space.

4.3 Referential and Structural Aspects of the Categories of Description

The hierarchical and inclusive structure of the categories of description within the outcome space is organized based on the distinct structural and referential aspects of the expressed statements that inform the categories of description. The structural aspect refers to the features discerned and focused on within the category. The referential aspect refers to the global meaning of what is being focused on.

Three distinct structural aspects of the outcome space were identified within the delimited statements expressed by faculty. The statements expressed focused on either the subject of the courses being taught, the coherence of the different aspects related to curriculum, or the student. In examining the conceptions expressed by faculty, three referential aspects were identified in my analysis. These are the externally imposed aspect of curriculum, the learning-oriented aspect, and the practice-oriented aspect. The hierarchical and inclusive relationship of the categories of description identified in this research is presented in Table 4.1.

Referential Aspects (the global meaning of what is being focused on)			
Structural Aspects (features discerned and focused on)	Externally Imposed	Learning-Oriented	Practice-Oriented
Subject	1. Curriculum is Prescribed	2. Curriculum is the Subject Matter to be Learned	
Coherence		3. Curriculum is Structured	4. Curriculum is Taught and Assessed
Student			5. Curriculum as Personal and Social Development

Table 4.1 The Structural and Referential Aspects of Faculty Conceptions of Curriculum

As seen in Table 4.1, the differing referential and structural aspects align to form the categories of description and define the outcome space as a whole. Beginning with the first category of description, curriculum is conceived as the subject matter prescribed upon the instructor by either the polytechnic institution or an external organization, or a combination of both. The second category of description continues to focus on the subject matter while shifting in its referential aspect to learning the knowledge, skills, or attitudes (KSAs) of the specific subject matter of the course or program. A shift in the structural aspect occurs in the third category of description as the focus changes from the subject to the coherent structure of the learning that is to occur. While maintaining a focus on the coherence of curriculum, the fourth category of description conceives curriculum as the KSAs of a subject that are taught and assessed in a coherent and organized manner. The fifth and highest category of description shifts again, no longer focusing on the coherent structure of teaching, learning, and assessing KSAs, but focuses on the student and their growth and development of personal skills and social awareness within the context of learning the subject-specific KSAs. Each category of description is presented in turn below, not only to detail its unique characteristics within the outcome space but to bring a heightened awareness of the variation that exists between them.

4.4 Faculty Curriculum Conceptions: Categories of Description

Figure 4.1 provides a visual representation of the outcome space, its categories of description, and their key qualitatively distinct aspects within each category of description.

Curriculum for Personal and Social Development	• Personal growth of student • Social development of student • Unintended impacts on student
Curriculum is Taught and Assessed	• Learning outcomes guide teaching • Learning outcomes need to be assessed
Curriculum is Organized and Structured	• Expressed as learning outcomes • Structured at course, program, and institutional level
Curriculum is the Subject Matter to be Learned	• Learning Knowledge, Skills, & Attitudes (KSAs) related to a role in industry. • Cognitive, Psychomotor, & Affective Learning.
Curriculum is Prescribed	• Instituted by the institution, government, or external organization • Required documentation, KSAs, courses, programs

Figure 4.1 Representation of the Conception of Curriculum Outcome Space

4.4.1 Category 1: Curriculum is Prescribed

Statements expressed by faculty consistent with this first category describe curriculum as the subject or topic (structural aspect) prescribed to them. This curriculum has required elements or components imposed by groups within and outside the polytechnic institution. These requirements can include specific curriculum documentation, specific KSAs to be developed or learned, the mandated courses to be completed within the program, or the entire curriculum of a course or program. These mandates can be requirements of the program itself, the polytechnic institution, a partner educational institution, external accreditation bodies, the provincial government, or the federal government. Faculty have no or limited autonomy regarding the assigned curriculum, as decisions are made external to them. However, they are responsible for and held accountable to the prescribed curriculum.

The statements provided in Table 4.2 demonstrate this focus on subject, be it within the course or program, and its imposed nature. Within each of the expressed statements, faculty discuss the curriculum of their programs, but do so as it relates to the requirements created by groups beyond the individual faculty members. As these mandates vary in the type and degree of their

impact on curriculum as well as the nature of the governing body requiring them, various examples have been included.

Required Element	Requiring Body	Expressed Statement
Required Courses	Program	So this past year, the human resources introductory course became a mandatory course for all students in Business. (RP 7)
Curriculum Documentation	Polytechnic Institution	The course outlines have been more and more template-driven. The course learning outcomes are required on that outline, and the topics and activities as well as the assessment, and a bit of an assessment breakdown. (RP 3)
Program Curriculum	Partner Educational Institution	We do a Bachelor of Science of Nursing in collaboration with the Bighorn University. We don't grant a Wapiti Polytechnic diploma. It's with Bighorn University. So the curriculum is laid out for us, and then we tweak it obviously because we are rural, not urban. So we have little differences that we need to work out. (RP 2)
Program Curriculum	External Accreditation Body	So our program, all diploma programs in Social Work diploma programs in Alberta are accredited by the Alberta College of Social Workers. And so there are standards that have to be, that have to be met. (RP 4)
Program Curriculum	External Agency	Our students have to take some [CAQC required], you know, breadth electives [in the degree program]. We want them to be, you know, we want them to have, you know, broader perspective about the world and their place in it. (RP 3)
Program Curriculum	Provincial Government	So the [government-supplied] curriculum layout breaks it down. Like, it's one document for each trade. Ours breaks it down per year, and what components they need to cover. And so like you'll have, you know, code, like electrical theory first year. You'll have lab fundamentals. What type of lab components they need to learn. … And then each component will be broken down into sections. (RP 13)
Program KSAs	Federal Government	We do have a table of conformance that we have to meet in order to make sure that they [Transport Canada] can successfully accredit us. We do have to make sure that our table of conformance meets their requirements. (RP 11)

Table 4.2 Required Elements of Curriculum and Regulatory Body as Expressed by Faculty

4.4.2 Category 2: Curriculum is the Subject Matter to be Learned

Incorporating the first category of description, the second category continues to have the subject in the foreground of the conception (structural aspect) while the referential aspect shifts to learning the subject matter or KSAs of the course

or program. This conception of curriculum can be succinctly summarized as "what the students are expected to learn by the time they get through." (RP 1) The 'what' referenced in the quote is the knowledge, skills, and attitudes (KSAs) that are learned or developed (structural aspect). This subject matter comprises topics or concepts related to a specific industry role or profession. Curriculum within this category serves the purpose of preparing students for their future roles or professions.

This profession-related focus of curriculum is evident in the following statement, in which the instructor describes how, in learning to prepare a specific recipe, students are also learning culinary theory and cooking techniques that are applicable beyond the specific recipe and can be applied to additional recipes as well, which will be completed when working in their professional capacity of a cook.

> But it's more about like, "Okay, you know, you've learned this recipe and this recipe, you know, requests you to sauté something. But I want you to think more about like, okay, like one day, you're gonna be the industry. And you know, this isn't the recipe you're gonna make. But you are gonna be asked to sauté something. So make sure that you remember. You know, sautéing is a small amount of fat, high heat, tossing the foods in the pan looking for that, you know, golden brown to medium brown colour." that kind of thing, right. So you know, like, I say, just kind of focusing more on, "Do you know how to sauté? Do you know how to grill? Do you know how to, you know, pan fry?" That kind of thing. And making sure they know the differences between all of those cooking methods. (RP 15)

In addition to the role-specific aspect of curriculum, this category includes the cognitive, psychomotor, and affective learning expected of students in relation to the subject-specific KSAs. Cognitive learning can be seen in the above quote, with the expectation that the student learns the necessary elements needed to sauté a food. Psychomotor learning is evident in statements where instructors describe instances where students are expected to learn to physically perform a task, as seen in the following statement.

73

> *When we're talking about things like virtualization and infrastructure. What we're setting up is the hardware and infrastructure so that someone potentially could run a software program". (RP 8)*

Lastly, affective learning can be seen in the following quote, where the instructor describes changes that were made to their program following industry-provided feedback related to gaps in the program as it related to developing graduates' social skills or soft skills.

> *In terms of one of the gaps that was identified is emotional intelligence and self-awareness. That students coming out aren't particularly self-aware as to how they're being perceived by others, or that they're lacking the emotional intelligence to be able to read the room, to be able to read situations. So those were things that we added into the program. (RP 7)*

The application of learning is another aspect of this category expressed by participants. In the following quote, the instructor states that cognitive learning alone should not be the purpose of curriculum, and that applied learning is an important element of polytechnics.

> *"That's one of the reasons I really like working at polytechs [sic] is that it's very much about learning the skills so you can actually do something and not just memorizing theory." (RP 1)*

As phenomenography is interested in the variation of conception within the outcome space, simply describing each category of description does little to achieve this and leaves the reader to their own devices in identifying this variation. Therefore, I will make this variation more explicit as I compare the qualitative differences between this category and the first category of description. While both focus on the subject of the curriculum, they do so from two different lenses. Within the first category of description, curriculum is conceived as something external to the faculty that they are obligated to do or achieve. It is contractual in nature, with various broad administrative elements. Whereas, in the second category of description, curriculum moves beyond the broad required elements, shifting to focus on the details of the subject matter, or

KSAs, as well as the purpose of the subject matter, that being the things that students need to learn relating to industry or profession-specific subject matter. While still maintaining the prescribed nature of curriculum, faculty conceive of curriculum as the specifics of what learners will be achieving in relation to the subject matter.

It is important to note that faculty, when hired at polytechnics, would have limited experience with curriculum as conceived of in the first category of description, as they transition from working in their professions prior to becoming faculty. In contrast, they would have already experienced curriculum as conceived in the second category of description, as not only does it involve the KSAs that they use in their professions prior to coming to the polytechnic, but they also experienced curriculum in this way when they themselves were students in HE.

4.4.2.1 The Exclusion of Instruction.

The exemplar quotes I have provided in these first two categories of description describe the conceptions of what curriculum is for polytechnic faculty. As phenomenography aims to describe the variation that exists between the different ways a phenomenon could be conceived or experienced, it is equally valuable to include statements made by faculty that explicitly state what curriculum is not. As such, several faculty stated that while curriculum included what students needed to learn, it did not include their instructional practice or how the subject matter was taught. This intentional exclusion of instruction is clearly stated by Research Participant 7.

> *I think curriculum is a combination of what we teach and the methods in which we share that material. I don't think it touches on the, how you teach. I really don't. If I hear the word curriculum, I don't think "how". In my mind, it is the "what" we teach and the methods in which we are going to provide it to the students, or to engage the students with the material. (RP 7)*

Instructional practice as an aspect of faculty conceptions of curriculum is explored later in this chapter as an element of the fourth category of description.

4.4.3 Category 3: Curriculum is Structured

The third category of description continues with the learning-oriented nature of curriculum as the referential aspect. However, the focus of the expressed statements (structural aspect) changes from being the subject, as it was in the first and second categories, to now focusing on the coherent structure of the learning that is described in the curriculum. In this category of description, faculty statements discuss the ways in which curriculum is organized in a logical way. This organization forms the structure in which learning occurs from when students first begin to the end of the learning experience, be it a single course or an entire program of study.

This conception is articulated in the following quote, in which the faculty member uses a tree as a metaphor for the learning process with curriculum as the trunk that connects the subject and necessary KSAs to the students' learning.

> *To me, curriculum is kind of the piece that ties everything together. So the curriculum is kind of where you connect all of those requirements between the stakeholders, the competencies, the institution, the government, all of that stuff. Where you take all those requirements and you create the map as to how to bring those requirements and take it down. I kind of see it as kind of like the bridge between the students and the requirements and how you fulfill those. For some reason I just have a picture in my head. Which is not usually the way I think. Like just, if it was a tree, it would be like the trunk of a tree versus where all the leaves are all those requirements, and then it all kind of gets condensed and then the roots would kind of be the students. (RP 18)*

The curriculum consists of individual courses and a combination of courses that form a program, as described by Research Participant 2.

> *So then I would think curriculum is the courses, each course, and then the content that goes into the course. And then every course in the year, and then every year in the 4-year program. The culmination of that would be the curriculum. (RP 2)*

As one faculty member stated, this structural coherence makes curriculum rigid in nature, much like the trunk of the tree described by the research participant above.

> *And then as a post-secondary instructor, when I think of curriculum, it's very rigid. (RP 9)*

Within the curriculum structure, there is a logical progression in both the subject matter to be learned and its complexity. This progression is described in the following quote from an instructor as they relate how the curriculum is organized in the electrician apprenticeship program.

> *Yeah, for the curriculum itself, I would say First-year is like a major starting point. And you build on that each year a little bit. So start like sort of general rules First year, or you start with like general concepts in circuitry in First year. And then Second year, you start building on and looking at well, there's other components that we deal with, such as motors, inductors, and all that type of stuff, and then it adds on. So there is a like a scaffolding effect. Both, the theory is a fairly large proportion of scaffolding. Code, I would say, sort of builds. And then Fourth year is like mostly just a large review, and then you add on little tidbits of, "oh, we talked about this in Second year. But there's one step further." and you build on it that way. But then there is some components that its like, we've never talked about this before. This is something totally new and doesn't really correlate, or, you know, build up to that. (RP 13)*

Differing from the previous category of description, which places the KSAs of the subject at the forefront of the conception, this category of description does not leave the subject matter behind but shifts it into a secondary role. By bringing how the KSAs are organized and connected to the forefront, this conception of curriculum becomes concerned with how the curriculum is operationalized with the expressed purpose of supporting student learning. The KSAs are no longer stand-alone concepts but are interconnected and progress across time and courses. The purpose of curriculum is no longer solely related

to the KSAs needed in a specific industry or profession. It now includes the introductory or intermediary KSAs necessary to support student growth and achievement of final industry-specific KSAs. In other words, the KSAs needed in industry may be too complex for a student to develop in a single course, requiring courses or programs to include less complex or lower-skilled KSAs before students learn the required level of ability or knowledge.

4.4.3.1 Curriculum Expressed as Learning Outcomes.

As this category of description is inclusive of the first two categories, curriculum here continues to be thought of as what students are expected to learn while completing a course or studies. This learning is described by formal written learning outcome statements captured and communicated on mandated course outlines or syllabuses. These learning outcomes are written following outcomes-based education (OBE) practices using Bloom's Taxonomy to craft statements that describe what students are to achieve or demonstrate by the end of the course or program.

> *Then we have a list of course learning outcomes, and we use Bloom's taxonomy. … We use Bloom's taxonomy in our outcomes. (RP 3)*

As stated above, curriculum can exist at the course and program levels but also at the Institutional level through institutional learning outcomes.

> *We have institutional learning outcomes, program learning outcomes, course learning outcomes. (RP 9)*

An example of an institutional learning outcome was explicitly stated by one instructor.

> *It is actually one of our institutional learning outcomes is Indigenous knowledge and awareness, understanding and respecting the history, culture, languages, perspectives and present-day communities of Indigenous peoples. (RP 18)*

4.4.3.2 Learning Outcomes or Learning Objectives.

Throughout many of the interviews, participants used the terms learning objectives and learning outcomes interchangeably or in combination. I asked the participants for clarification to ensure I understood the terms correctly. The following exchange outlines this use of the terms and how faculty use these two terms interchangeably.

> *JB:* *You've used the term objective, but you've also used the term outcome. I find that sometimes people have different definitions for both, and sometimes they use them interchangeably.*

> *RP 16:* *Oh, mine would be interchangeable because in the classroom we used, like in school [primary and secondary], we would use objectives. And here we use outcomes, like at the college, we use outcomes. We never used outcomes in schools, and we don't really use objectives here. So it's just my generalization.*

4.4.3.2.1 Not All of the Important Learning is Captured in the Learning Outcomes.

However, these formalized curriculum statements do not capture all students learn within a course or program. In the interviews, faculty expressed how learning would occur outside the structured curriculum.

> *You know I do cover that a little bit because I feel it's necessary, but it's not something that's really mandated by AIT for them to learn how to cook for, you know, someone who's gluten-free, or someone who is following, what else? You know, a dairy-free diet, that kind of thing. (RP 15)*

The practice of using formalized learning outcomes to express the curriculum as part of outcome-based educational practice, combined with the interchangeable use of the terms outcome and objective and the fact that not all learning is captured as formal learning outcomes, has implications for curriculum development, change, and discussions within faculty groups and institutional curriculum departments.

4.4.4 Category 4: Curriculum is Taught and Assessed

The fourth category of description maintains the focus on the coherence of curriculum (structural aspect) in the foreground of the expressed statements, while the referential aspect shifts to the faculty's professional practices. Within this category, curriculum is the teaching and assessment of the learning outcomes listed on the prescribed course outlines.

The structural aspect of coherence in this category is seen in statements detailing the necessity of ensuring that the resources, instructional approaches, and instructional choices are planned and selected to support students' successful development and achievement of the learning outcomes. The following three quotes provide examples of the coherence between the learning outcomes and instruction.

> *JB: What is curriculum to you?*

> *RP 8:   I guess the resources that ultimately help them achieve the outcomes and objectives.*

> *But any of my courses where I can build in practical application, we do. As you're reading through the course outline, when you come across phrases called, "The student shall demonstrate changing an orifice plate. The student shall demonstrate building a parallel circuit." That's where we take our queues from. From the outline going, oh, okay, where "the student shall demonstrate," that's usually keywords that we try to build a lab along those purposes. (RP 6)*

> *I think the idea of the outcomes and the topics is to kind of give direction for what they're doing that week. (RP 9)*

The following two quotes demonstrate the inclusion of the professional teaching practice in this category's referential aspect.

I think that the curriculum is both those tiny little pieces like the hour-by-hour activity in the class. (RP 3)

The short answer is I have to teach what's in the course outline because that's like what we've committed to the students and what the students are to be expecting. (RP 1)

In addition to teaching the subject matter to support the achievement of the learning outcomes, assessing a student's ability to demonstrate achievement of those learning outcomes is also included as a professional practice involving curriculum. Faculty select or create assessment instruments based on their ability to measure learning outcome achievement. This relationship between outcome and assessment is shown in the following faculty statements.

So for those assessments, it's making sure that I have a way to, I hopefully have a way to see whether or not we've met those outcomes and objectives. … The curriculum is also informing my assessments. (RP 1)

But the course outcomes, I think, are really most tied to what is assessed in the class. ... But I would say the key is that we are assessing the outcomes, and the content informs them. (RP 9)

The coherent relationship between the prescribed course outline, instruction, and assessment is evident in the following statements made

by research participants.

And so what I do is I basically take those out and I treat that like a checklist to make sure that we're hitting something both in our content and then fitting as many of those into the rubrics for the assessments that I give out because I've got, I'm limited by the type of assessments, but beyond that, as long as I'm creating something that falls within that. (RP 1)

I would say, everything is captured on the course outline. Again, it's a 15 weeks long semester, and I make sure that we've covered everything before the final exams. (RP 10)

As the structural aspect of this category continues to be curriculum coherence, alignment between the learning outcomes, learning resources, teaching practices, and assessment methods is necessary. In other words, the assessments used to measure student achievement must be aligned with the learning outcome statements, and the learning resources and teaching methods support students in achieving the learning outcome. The following exchange is representative of statements discussing this alignment.

JB: *So, with those course outcomes that you guys collectively worked on and sought feedback from, what's their connection to the content of what is taught and the way something is taught? Is there a connection?*

RP 12: *Yes, so what we often make that connection. And so whenever, so the student evaluation section in the course outline has links outcomes with activities.*

And so you know, outcome 4, for example, is … "develop and

communicate a strategic plan for corporate social responsibility and sustainability-related business initiatives." And then it also has a section for concepts, skills, and issues used to support this outcome. Those are listed there.

And then, so if you go later down to student evaluation, you see outcome 4 for the strategic plan piece on discussions, assignments, in-class activities because that helps build towards it. … So all of the outcomes are linked to the activities and descriptions. And so, even as I'm developing these new courses right now … we had the outcomes, but we also wrote down some of the activities and tried to link it and linked them to the outcome. So, this is the outcome, what are we doing to achieve it?

The previous categories of description situated the instructor outside of the curriculum, with curriculum being a phenomenon that exists within polytechnics that they need to be aware of as it relates to their students. However, they, as individuals, are not part of the curriculum process. This changes within this category of description as instructors are included as an integral part of curriculum as they actively teach and assess the subject matter that students are expected to learn. Within this category, faculty's choices and actions impact the responsibility and accountability that existed in the prior categories of description. Furthermore, it is within this category of description that issues such as the effectiveness of instructional and assessment practices in supporting student performance become relevant to the instructors, either in the context of their classroom or as part of larger curriculum issues, including program quality assurance processes, faculty performance management, student feedback surveys, professional development of faculty in the area of educational practice, and the scholarship of teaching and learning (SoTL) research activities of faculty.

4.4.5 Category 5: Curriculum for Personal and Social Development

The fifth and highest category of description shifts the structural aspect to bring the student to the forefront while maintaining the instructor's professional practices as the referential aspect. Moving beyond the coherence of curriculum and its relation to teaching and assessing learning, this category of description describes curriculum in terms of the instructional practices of faculty as they relate to students' personal and social development. Within this category, curriculum includes the explicit or implicit impacts on a student's personal and social development that arise through the instructor's practices. This development moves beyond the learning outcomes and the subject matter of the course or program. This development is applied by the student during their studies, during their career, or to the student's personal life outside of school or profession.

Within this category, one purpose of the curriculum is to support students in developing their ability to 'learn how to learn' within the polytechnic environment and become lifelong learners upon graduation.

> *One thing that's always stuck with me as going through education and things like that is one Sociology prof said to me, you know, "it doesn't matter what you learn. It matters that you can learn". And so that's sort of something that I try to present in classes and be like, "Hey, like you, if you can understand the fundamental concepts you can break down anything and work your way through logically. If you can find those learning steps that are required for you to learn." (RP 13)*

Another purpose of curriculum is to support students in learning interpersonal skills that are not traditionally seen as part of academic learning. This personal development supports students' success once they complete the program and their development as respectful people.

> *Oh, yeah, so much of it is those, you know, those kind of soft skills, right. Most people have to work in a communal environment. So we try to, it's mostly informal now, like, how do you get along with people right? What's, what is kind of like basic etiquette when you're in a shared environment and people coming and going, cause we give our*

84

students 24/7 access to their workstation. Yeah, you know, what is that,
what is that dynamic like, you know, working with a bunch of people?
And maybe you don't actually like all of them but you have to work with
them. Right. So we that, and again, that's less formal than maybe it
should be. It's hard to know exactly how to articulate that. But I hope
some of that soft skills of, here's how to not be an asshole, if I can,
right, if I can make it blunt. Like, we that that's really, that's important to
me personally, right. You can, everyone can take a course to get better
at a certain skill or to learn a new, to learn a new piece of software,
right, or a new application or a new technique. But how you get along
with people and how you treat other people, that's I really hope that
they come away with some of that, and I try to model that behaviour
myself, you know, being respectful. (RP 3)

The last purpose of curriculum in this category is to develop an awareness of
broader societal issues, such as equity, diversity, and inclusion, in students.

In my design courses, it would be like "Hey, we're designing a form.
These are the drop-downs. What are some things we should make sure
we include in our drop-downs to make sure that we're not, you know,
closing the door on someone who can't even continue with the form?"
We talk about bias in machine learning algorithms and how racialized
faces aren't showing up as much in data sets. Feminine faces aren't
showing up as much in data sets. So, they just literally don't work as
well for folks who aren't presenting as a more stereotypical white
masculine person. (RP 1)

This category also includes the impact of hidden curriculum on learners'
personal development. While not intentional by the instructor, the program, or
the institution, this reinforces existing societal power structures favouring
Western colonial educational and cultural behaviours. The following statement
exemplifies this.

I'll give an example. I come at things from a … critical race perspective,
critical whiteness perspective. So we teach about white privilege but the

hidden curriculum may be that our entire curriculum is based on a white privilege perspective, really, and doesn't have enough. It is still based on a colonial way of being. And so that's the hidden curriculum that you know we're still teaching students, I mean, as much as we talk about being anti-oppressive. And we talk about anti-racism. And we talk about all those kinds of things. We're still, the hidden curriculum is still that we're not, we haven't decolonized our curriculum. So we're still replicating models that are colonial. That are inherently racist. That are, you know, that aren't um, that replicate this system that we all exist in … That's just there. And so I think that, and as much as we might want to be transparent about that, I don't think we are. (RP 4)

This category of description includes the purposeful review of curriculum to ensure that hidden colonial practices are removed before the curriculum is taught to students, in an effort to decolonize it.

We also try to have our curriculum reviewed by some of our Indigenous Liaison positions to see, you know, are we you know, are we using some, you know, overly colonial language, or are we being, you know. Are we presenting something that's awkward or not as inclusive as it could be. (RP 3)

This final category of description has the greatest variation from the other four categories. While still involving instructors' teaching and students' learning, the curriculum in this category is no longer viewed as subject, industry, or profession specific. It is viewed as impacting the students as individuals who need to grow and develop as human beings. Unlike curriculum in the other categories, curriculum in this category is not prescribed by the institution or other organizations. It is decided and implemented by the instructor, acting with complete autonomy, in direct contrast to the limited or completed lack of autonomy seen in the other categories.

4.5 Impact of Academic Origin and Teaching Experience

The second research question I investigated examined the relationships between faculty members' understandings of 'curriculum' and their academic

credentials or their teaching experience. As I stated in Chapter 1, when discussing my background as a researcher, my research questions were informed by my experiences working with and discussing curriculum with polytechnic faculty over the past 14 years. As such, my second research question arose from reflecting on my experiences and interactions with faculty from diverse educational backgrounds and varying years of teaching experience. Reflecting on these personal experiences, I recalled that experienced faculty who had attained higher levels of education appeared to have a broader and more complex view of curriculum than newer faculty with less educationally accomplished backgrounds. As such, I initially thought that faculty members with different academic backgrounds would have differing conceptions of curriculum, with those having earned higher levels of education expressing more sophisticated conceptions. Likewise, I initially thought that faculty teaching longer and potentially being exposed to more educational theory would have more sophisticated conceptions.

The extracted statements that comprised the pool of meanings in the outcome space were reviewed for each research participant, and the highest level of conception expressed was identified. This was then compared to the highest level of academic credentials achieved. Table 4.3 shows the categories of description, the number of faculty with the associated highest level of expressed conception, and the types of academic credentials held by the faculty.

Category of Description	Number of Participants	Academic Credentials Held
1	-	-
2	-	-
3	1	PhD
4	8	Certificate, Journeyperson, Diploma, Master's, EdD
5	9	Journeyperson, Diploma, Master's, PhD

Table 4.3 Comparison of Highest Expressed Conception and Level of Academic Background

Given the results I have outlined, there does not appear to be any relationship between the sophistication of a faculty member's conception of curriculum and the highest level of education attained.

The relationship between the number of years of teaching and the highest level of expressed conception was then examined by identifying the highest level of expressed conception and comparing it to the number of years of teaching experience. Table 4.4 shows the categories of description, the number of faculty with the associated highest level of expressed conception, and the years of teaching experience for each faculty member.

Category of Description	Number of Participants	Years of Teaching Experience
1	-	-
2	-	-
3	1	16
4	8	7 months, 2, 5, 8, 13, 23, 26
5	9	1.5, 5, 7, 10, 15, 18, 25

Table 4.4 Comparison of Highest Expressed Conception and Years of Teaching Experience

Given the results outlined above, there does not appear to be any relationship between the sophistication of a faculty member's conception of curriculum and the number of years they have been teaching. While several other factors could account for the variation in faculty conceptions of curriculum, such as differences between academic fields, pedagogical philosophies, and socio-cultural considerations, I chose not to explore them further. During my re-analysis of the data, I identified a different influencing factor that I felt warranted further examination. That factor is the institutional language related to curriculum that faculty are exposed to and come to use when discussing curriculum. This research outcome will be discussed further in the following chapter.

4.6 Descriptive versus Prescriptive Accounts of Curriculum

During the phenomenographic analysis, I observed a difference in the participant responses to my descriptive interview questions and their responses

to my final interview question, "For you, what is curriculum?" The participants' responses to the final interview question, which was prescriptive, were frequently at a lower level of conception than their responses to the descriptive questions asked during the interview. To determine if that was the case, I analyzed each participant's extracted statements included within the outcome space. These statements were then sorted into two groups: responses to the final question and responses to the rest of the interview. Each expressed statement was then analyzed and categorized by the category of description that aligned with the associated structural and referential aspects. The highest expressed category for each group of statements was recorded, and then the two groups were compared. Table 4.5 shows the relationship between the highest category of description that is representative of the statements expressed by instructors during the main body of the interview (descriptive expressions) and the highest level of category of description that is representative of the statements expressed in their responses to the final interview question (prescriptive expressions).

Of the 18 research participants, 15 expressed statements that aligned with a lower level of conception when directly asked what curriculum was than when they described their experiences with curriculum during the body of the interview (the black cells). Three participants expressed statements representative of the same level of conception during the interview and in response to the final question (the white cells). No responses to the final question were aligned with a higher level of conception than what was expressed during the interview (the grey cells). Of those that expressed prescriptive statements representative of a lower level of conception than their descriptive statement, seven expressed statements aligned with a category of description that was one level lower, three expressed statements that were two levels lower, and five expressed statements that were three levels lower. No participant responded to the final question with statements that were four categories lower. This difference can be seen in Table 4.6 in examining the statements expressed by Research Participant 7.

| | Highest Prescriptive Category of Description[1] | | | | | |
Highest Descriptive Category of Description	1	2	3	4	5	Total
1. Curriculum is the Subject Matter to be Learned	0	0	0	0	0	0
2. Curriculum has Rules and Requirements	0	0	0	0	0	0
3. Curriculum is Structured	0	0	1	0	0	1
4. Curriculum is Taught and Assessed	1	0	6	1	0	7
5. Curriculum as Personal and Social Development	0	4	3	1	1	9
Total	1	4	10	2	1	18

[1]These are responses to the final question: "For you, what is curriculum?"

Table 4.5 Relationship Between Instructor Descriptive vs. Prescriptive Curriculum Statements

Research Participant 7	
Descriptive Statements	**Prescriptive Statements**
Category of Description: 5	Category of Description: 1

Descriptive Statements	Prescriptive Statements
And this is what we heard from our PAC group. Is that we want people coming out who are mature, who are problem solvers, who have initiative, and who have that emotional maturity and emotional intelligence to be able to read the situation. So those are the types of skills that are really valuable in the workplace. They can be developed. I don't think people are either born with them or they have it, or they don't. I think they can be developed for the workplace.	*JB: According to [you], in your own words, what is curriculum?* Okay. I think curriculum is a combination of what we teach and the methods in which we share that material. I don't think it touches on the, how you teach. I really don't. If I hear the word curriculum, I don't think "how". In my mind, it is the "what" we teach and the methods in which we are going to provide it to the students, or to engage the students with the material.
And I think that is what having that face-to-face interaction, doing those formative and doing simulations, putting people in the situation where they get to demonstrate those skills. You see that behaviour, and then your like, "Okay, stop for a second. We	*JB: So for methods, just wouldn't you mind just clarifying between methods and the "how." So when you're saying methods, what are you encompassing within methods?* Case studies. Exams. The methods that the students are gonna interact with the

90

	material. Their own reading, their own, etc. Not necessarily the instructor's "how".
need to talk about what's going on. Are you reading the room here as to what's going on? The feedback that you're getting."	*JB: So, not what the instructor themselves is doing in the classroom?*
	Correct. In my mind, that curriculum doesn't include that term and that's just my mind.

Table 4.6 Example of Difference Between Descriptive and Prescriptive Statements

In the descriptive statements expressed by Research Participant 7 in the first column, the development of their students' interpersonal skills and behaviours is their focus, placing their conception at the highest level. Yet, their prescriptive statements, when asked to describe what they believe curriculum to be, distinctly focus on the subject matter that students are required to learn and the resources they use to learn it, placing them in the second category of description.

This unexpected finding warranted further analysis of the participant's prescriptive responses, as well as a return to the data to identify potential influencing factors that would account for this difference, as it is significant that over 80% of participants responded to the final question, "For you, what is curriculum?", with statements reflective of a lower category of description compared to how they express aspects of curriculum when speaking about their courses and programs. In further analyzing the prescriptive responses, I noticed that all participants, except one, referenced mandated aspects of their programs' curriculum, required instruction, and institutionally mandated curriculum documentation, including course outlines, learning outcomes, learning objectives, and assessments. In my review of the data and the analysis that I had already completed, I identified two categories of description composed of delimited statements made by research participants regarding their experiences with curriculum that, while external to the phenomenographic outcome space, are related to the differences between their descriptive and prescriptive accounts. These two categories of description are explained in the following section. Their relationship with the difference between descriptive and

prescriptive accounts of curriculum, as well as the significance of this difference in accounts, is explored in the following chapter.

4.7 Faculty Curriculum Experiences External to the Outcome Space

As I described in the previous chapter, I returned to the data to identify factors that may account for the differences between the research participants' descriptive and prescriptive descriptions of curriculum. In rereading the interview transcripts, the delimited statements within each category of description, and the delimited statements within the categories of description removed from the final outcome space, I noticed that two of the categories of description that I had removed from my phenomenographic outcome space during the fourth stage of analysis could provide insights into this difference in descriptions: faculty perceptions of curriculum as a specialized subject matter and faculty experiences with mandated institutional curriculum processes. In the following sections, I outline examples of the different aspects of these two ways of thinking about curriculum. Regarding how they are reflected in institutional curriculum language and how that, in turn, influences faculty conceptions of curriculum, I will discuss this in the following chapter.

4.7.1 Curriculum as a Specialized Subject Matter

During their interviews, twelve of the eighteen participants made statements that referenced curriculum as a topic involving specialized knowledge, or that curriculum work needed to be completed by, or done in collaboration with, staff who possessed this knowledge and that work in roles directly related to that knowledge. In expressing that curriculum was a subject that required specialized knowledge, many participants implied or stated outright that there is a correct and an incorrect way to think about curriculum. The response of Research Participant 2 to the final interview question clearly demonstrates this thinking:

> JB: *What is curriculum? What parts make up curriculum in your*
>   *mind as an educator?*

> RP 2:   *Curriculum? Oh, can I get back to you on that? Um. That's a*

great question. What is curriculum? Curriculum is this... this isn't right? But curriculum is the stuff we're supposed to teach, and that's probably not right.

JB: *So if it's not right, what's not right about it, for you?*

RP 2: *Well, it's just what we're supposed to teach. But then, is that what we're supposed to teach? Is that the competencies that we're supposed to teach too? I've never thought about what is curriculum.*

In addition to making statements regarding the correctness of curriculum thought, the specialized nature of curriculum knowledge is evident in the removed category of description, *Curriculum as a Specialized Subject Matter*. Among the statements that align with this conception, various aspects relating to curriculum were expressed. This includes references to different philosophies or theories of curriculum as exemplified in the following quote:

> *So I think, as a curriculum scholar, when I think of curriculum, I think of sort of the philosophy behind curriculum, the methodology and sort of like the really high level. You know, who are you and how does this impact what you're doing? (RP 9)*

Another aspect expressed is the connection between signature pedagogies or pedagogical approaches and curriculum. An example of this is seen in the following statements explaining the curricular approach taken in a nursing program and how its underlying philosophy informs the pedagogical approaches within the program.

> *We do a concept-based curriculum, which means that we teach our students a concept. So it's the concept of mobility. So you learn about mobility, how it affects the whole body. So it's not a systems teaching. So you don't learn about the pancreas or the skeletal system, or whatever. It's the concept of mobility and how it applies to everything. And so you, that information is laddered through all 4 years, and that thread is drawn. (RP 2)*

Probably not because there are philosophical underpinnings that hold
up the curriculum, and there are, like the philosophical, like the concept-
based curriculum. So then, all the philosophical underpinnings of what a
concept-based curriculum looks like. So then that would guide how you
develop your content, and your courses, and your program. (RP 2)

Further to the philosophical and pedagogical aspects of curriculum knowledge, participants noted the need for and application of specific curriculum design theories when designing their courses. This includes knowledge of Bloom's Taxonomy (Krathwohl & Anderson, 2002) and the selection of verbs to use when writing learning objectives or outcomes, as well as understanding backwards design (Wiggins & McTighe, 2006). Both of these can be seen in the following statements:

I don't remember what they were but, so they would be a combination
of the knowledge, the skills, the values, because that's what they are in
social work, right. So they would be, you know, framed in terms of, and
we develop them according to, with Bloom's taxonomies. So they'd be
cognitive, affective, I don't think they're any psychomotor, but cognitive
and affective. (RP 4)

I mean, it's a way of designing the course, really, because you know, I
mean, we do outcomes-based design. And so it's, you know, you set
out your outcomes, you create assessments that are to measure those
outcomes, right. (RP 4)

Lastly, in speaking of the specialized knowledge of curriculum, participants spoke of working with staff employed at their institution who worked in specialized roles related to curriculum, who possessed this knowledge and supported the faculty in designing and developing curriculum. These professional staff worked with the institutions' centres for teaching and learning and had various titles, including instructional designer, learning designer, or learning specialist. In speaking of developing courses with other faculty, Research Participant 18 explained the role of these curriculum specialists,

Yeah, we do have the Centre for Teaching, Learning and Scholarship. So, there is a whole department that's there to help teach us how to teach and stuff. So, I worked very closely with two of the learning designers there to go through and organize the content, and they helped us with the wording for the course learning outcomes. … I learned a lot about curriculum last year. (RP 18)

4.7.2 Mandated Institutional Curriculum Processes

Reviewing the statements that I had included in the removed category of description relating to mandated curriculum processes, in conjunction with the interview transcripts, I identified that, in their interviews, all research participants spoke of institutionally mandated processes or expectations related to curriculum within their instructional context. These include formal curriculum governance, curriculum quality assurance, curriculum development, and the instructional and assessment requirements of faculty in relation to formal curriculum documents.

Speaking of the challenges associated with the prescribed nature of curriculum, communicated via formal learning outcomes, and the mandated curriculum governance process at their institution, *Research Participant 9* lamented, "But there, you're always a little bit restricted by the outcomes. And they're so hard to change. You can't just change them. Like, they take like two years to change, basically." When asked to explain the process for changing learning outcomes, they stated,

> *They are approved by a School Council. Then Dean's Council, Curriculum Committee, and Academic Council. So, they go up the chain internally to be able to be approved. And then, if you need to make changes to them, you have to go through kind of like the, not the whole rigamarole, but School Council and Academic Council. I think. To change, especially changing outcomes, it's a bit of a process. (RP 9)*

The quality assurance experiences shared by Research Participant 4 when discussing the external accreditation requirements for their program are similar to those of many participants. They explained,

> *We also have quality assurance practices. So, programs have to be reviewed, and I think it's on a cycle of, you know, every five or seven years or something. So, it may have been that the two processes, the accreditation process. They also have a review, a review cycle. So, it may have been those two processes came together at the same time. (RP 4)*

A further complementary curriculum process, mandated curriculum mapping, was discussed by several participants. This mapping process supports both quality assurance and curriculum development and involves demonstrating alignment between multiple aspects of the course and program and institutional learning outcomes and is evident in the following quote:

> *We use Bloom's taxonomy in our outcomes. We have course topics, kind of resources, assessment. You know that. … I think we're doing a better job of trying to record the curriculum. So the first stage … each course has a curriculum element sheet. Those [learning outcomes] are all mapped to the program learning outcomes, right. Which are supposed to be mapped to the institutional outcomes. So we have all that.*
>
> *Yeah, that is, that can be messy. More often than not, what happens is that we share a previous course outline, right, like the course syllabus. Which is supposed to be built off the curriculum element sheets, but, as you know, things drift quite a bit. But my guide, my blueprint, is the curriculum element sheet for that course.*
>
> *I think how we're operating mostly is the course learning outcomes, non-negotiable, right. The students have to meet these. The topics you have a little bit more flexibility on. (RP 3)*

This required curriculum mapping can extend beyond the learning outcomes to include assessment practices within the course, as *Research Participant 9* states, "We need to map the assessments to make sure that we are meeting all the outcomes."

Lastly, instructional practices may be affected by mandated curriculum processes, as evidenced by the first category of description, *Curriculum is Prescribed,* identified earlier in the chapter. More specifically, many participants discussed the impact of the formal course outlines as seen the following statements:

> *The short answer is I have to teach what's in the course outline because that's like what we've committed to the, to the students and what they're, the students are to be expecting. (RP 1)*

> *Well, I have to some extent my hands are tied by the Wapiti Polytechnic course outline criteria. We do have to list learning outcomes. (RP 5)*

> *The curriculum that I teach is mandated. The outcomes are mandated by the Alberta government and our documentation that we use to teach is, these (holding up a booklet) are digital, these are ILMs, learning modules, and the layout of modules is exactly uh, through the outline as specified by the Alberta government. Like the chapters and the headings they are right out of the outline. (RP 6)*

> *Well, we have a core syllabus that has certain requirements. What's in the syllabus? Well, it's kind of interesting at Moose Polytechnic because we have, … what's called a course outline and we have a syllabus and planning calendar. And both of these documents are required by Moose Polytechnic. The syllabus is actually sort of automatically made by the system based on what we submit into our sort of learning system. So it includes, it's quite generic. It's called a course outline and includes a course description and learning outcomes. (RP 12)*

4.8 Faculty Engagement with Educator Professional Development

During my return to the data that I described above, I noticed that when discussing their experiences with teaching, learning, assessment, and curriculum several of the research participants referred to related professional development activities that they had participated in. In this thesis, I define professional development as a faculty member's engagement in learning activities to that increases their awareness, knowledge, skills, and attitudes related to a targeted competency in their profession. Within the context of educator professional development, these learning activities may include scholarship-informed teaching, educational workshops, attending educational conferences, formal educational courses or programs, or coaching by educational developers or more experienced colleagues that expose faculty to a broader and deeper understanding of curriculum.

Reviewing the interview transcripts further, I noted that these faculty also used educational language and terminology to describe their experiences and made statements that aligned with higher conceptions of curriculum. This more complex view of curriculum and the connection to educator professional development activities can be seen in the following quotes from Research Participant 17. In describing their instructional priorities, they repeated discuss teaching students how to learn, stating:

> *Honestly, the biggest thing that I try to push on students these days is learning how to learn. And that has changed since I first started teaching. When I first started teaching, I had a lot of difficulty … Couldn't figure out why people couldn't get it. So, I've had to learn to teach. I already knew how to know stuff but I didn't know how to teach stuff when I first started. Since I've learned how to teach. I'm now*

focusing on teaching other people how to learn. (RP 17)

So teaching students how to learn has been my primary focus in the past few years. (RP 17)

Is it's not about, it's not about the content that they're learning. It's about how they learn. (RP 17)

I like to think that if you learn how to learn, you can apply that to life in general. (RP 17)

Later in the interview transcript when asked specifically about curriculum, they discuss their completion of formal instructor training, the Provincial Instructor Diploma Program (PIDP):

So when I think of curriculum, I am drawn back to like some of the courses in PIDP, where you're actually designing curriculum. And there was one course I took, I have to share this with you really quick, and it was like, it was talking about there's like two big branches of curriculum design, and one is on the more touchy, feely side. And then the other is more on, like a technical side. So like, one is about developing emotions or new thought processes, that kind of gist. I don't remember what the terms are, and then the other one is like, more concrete. (RP 17)

The above quotes demonstrating how upon completing professional development and "learning how to teach" Research Participant 17 adopted a more sophisticated concept of curriculum.

4.9 Chapter Summary

In summary, this chapter presents the outcomes of my research and provides answers to the research questions. The answer to my first research question is demonstrated within the structure of five hierarchical categories of description that are qualitatively different and represent the variations in how faculty at Canadian Polytechnics conceptualize curriculum. Regarding my second research question, I demonstrate that the level of educational achievement or

the amount of teaching experience held by faculty members does not appear to impact the complexity or sophistication of faculty conceptions of curriculum.

This chapter closes by examining an unexpected outcome I identified during my data analysis. It concerns how faculty describe curriculum when discussing the courses or programs, as opposed to how they describe curriculum when asked directly what they believe curriculum to be. Most faculty interviewed provided more complex descriptions in general conversation than when they prescribed what curriculum is. Returning to the data and analysis that was done previously, I identified and outlined two factors that may account for this difference: viewing curriculum as a specialized subject matter and the influence of mandated institutional curriculum processes. This additional analysis also identifies a relationship between the use of educational language, more complex conceptions of curriculum, and faculty who have completed educator professional development.

In Chapter 5: Discussion, I will demonstrate how the research outcomes presented in this chapter advance the understanding of higher education faculty conceptions of curriculum in a manner that is not situated within a subject-specific context, and in doing so, contribute to the body of knowledge in curriculum research. To achieve this, I will present two arguments relating to the research outcomes. Firstly, institutional language related to curriculum influences faculty conceptions of curriculum. a Secondly, I argue that the influence of institutional curriculum language on faculty can be mitigated through professional development related to educational and curriculum theory, as well as by providing opportunities and space for faculty to engage in robust curriculum discussions.

Chapter 5: Discussion

5.1 Introduction

In the previous chapter, I described three different outcomes of my research:

1. Qualitative variation in the different ways instructional faculty at polytechnic institutions view curriculum.
2. The lack of influence of educational background and years of teaching experience on how faculty express their experiences with curriculum.
3. A qualitative difference in the prescriptive descriptions of curriculum stated by faculty and their descriptions of their experiences related to curriculum.

In this chapter, I present what I argue to be an important influence on faculty conceptualizations of curriculum: the institutional curriculum language used within polytechnic institutions. I will situate this argument within both the current body of literature and my research outcomes. In doing so, my argument will demonstrate how my research adds to the existing literature and represents an original contribution to the current understanding of faculty conceptualizations of curriculum.

In structuring my argument regarding the influence of institutional curriculum language on faculty conceptions of curriculum, I will discuss several aspects of my research outcomes: the variation in conceptions described in my research, the differences between the descriptive and prescriptive accounts of curriculum provided by the research participants, participants references to curriculum as a subject that requires specialist knowledge, as well as the frequent references participants made relating to the mandated or formal curriculum processes of their institution.

I conclude this chapter by arguing for the need for faculty to develop more complex conceptions of curriculum. To support my argument, I outline the issues that can result from faculty viewing curriculum in less complex ways. I also explain why institutional curriculum language influences faculty to the degree it does. I present two ways this influence can be mitigated: professional development opportunities related to curriculum theory and the need for space and opportunities for faculty to engage in robust curriculum discussions.

5.2 The Influence of Institutional Language

When initially planning my research study, it seemed logical to me that faculty who had attained higher levels of academic credentials would have been exposed to a deeper or more complex view of curriculum, in part due to their having participated in a formal educational setting for a more extended period. Likewise, it seemed logical to me that the longer someone taught in higher education, the more they would have been exposed to more sophisticated viewpoints relating to curriculum through their interactions with others regarding curriculum matters and their professional development as educators.

As my analysis of the data in Section 4.5 indicates, my assumptions were incorrect. The act of simply teaching at a higher education institution for an extended period does not necessarily lead to the development of a more complex view of curriculum. Nor does the attainment of higher levels of academic credentials within non-educational fields.

As I discussed in Section 4.5, if teaching experience and academic background do not influence faculty, other factors must account for the variation present in faculty conceptions of curriculum. While factors such as differences between academic fields, pedagogical philosophies, and socio-cultural considerations may impact faculty descriptions of curriculum, my further analysis of faculty curriculum experiences external to my outcome space highlighted the influence of institutional curriculum language, as expressed in policies and processes and reinforced through conversations and formal discussions among faculty, academic leaders, and other institutional staff. It is from this institutional curriculum language that the institution's curriculum culture is formed and reinforced.

The connection between curriculum culture, as communicated and enacted through institutional curriculum language, and the resultant curriculum in higher education has previously been shown in various ways. Writing about curriculum design in higher education, Makinen and Annala (2010) linked the process of curriculum design to the cultural, social, and political traditions of the various disciplines within an institution. Bovill and Woolmer (2019) argued that to

understand curriculum, one must examine it within the institutional and disciplinary culture that exists, while also acknowledging the impact and scrutiny of institutional quality assurance processes. Ashwin et al. (2020) stated that these institutional processes, or perhaps more plainly stated, institutional rules and practices, then shape and structure the curriculum within higher education. Furthermore, the connection between institutional curriculum language and faculty is evident in how faculty make decisions related to curriculum. Roberts (2015) identified that for some faculty, their key concern when making curriculum-related decisions was ensuring that the curriculum met the institutionally required learning outcomes as opposed to focusing on knowledge or skill development. Lastly, Blackmore and Kandiko (2012) argued that the basis for enabling greater academic coherence within curriculum is to develop an understanding of curriculum as a social practice.

While this literature connects institutional cultures with curriculum, it provides limited insight into the specific effects of institutional language on faculty understanding of curriculum. Further research is needed to better understand the impact of institutional curriculum language. More specifically, research is needed to better understand how institutional curriculum language fosters a shared understanding of curriculum among not only faculty, but also all institutional staff engaged in curriculum work. Another area that needs further exploration is the extent to which institutional curriculum language acts as a barrier for faculty in developing a more sophisticated understanding of curriculum. Lastly, research is needed to investigate the degree to which institutional curriculum language obscures and invalidates the views of faculty who already approach curriculum in more sophisticated ways.

While further research is needed to investigate the extent of influence of institutional curriculum language, the research conducted and reported in this thesis does provide evidence that institutional language does influence faculty. This influence is evident in the descriptive accounts of the curriculum provided by faculty during their interviews, particularly when those statements are compared to the prescriptive definitions they offered when asked to describe what curriculum was, in their own words. As I stated in Chapter 4, more than

80% of the research participants expressed higher levels of conceptions of curriculum when describing their experiences as faculty than when asked to state what curriculum was, in their opinion. Furthermore, among all prescriptive descriptions of curriculum, only three participants' responses reflected categories of description higher than *Category 3: Curriculum is Structured,* which separates teaching, assessment and students' personal and social development, from their prescribed views of curriculum.

Why do most instructors express simpler, less complex conceptions of curriculum when directly asked, and what is the cause of this difference? I would argue that institutional language surrounding curriculum becomes the default response for faculty when asked to define curriculum, as their views are based on their experience of hearing curriculum being discussed, described, and debated within the context of their role as instructors within their institutions.

As I described in Section 4.7, this institutional language is communicated in two different ways. Firstly, in the language that faculty hear, learn, and implement when working with curriculum specialists in their institutions, when they are engaged in curriculum work. Secondly, in the language they engage with, relating to the mandated curriculum policies and processes that govern curriculum development and implementation. By being codified in policy, the institutional curriculum language outlines the rules of what is allowable and what faculty may be held accountable for if they fail to follow the stated curriculum mandates. Simply put, a faculty member's awareness and understanding of institutionally described curriculum may impact their job performance and potential performance evaluations. Therefore, faculty are likely to view the institutional curriculum language as the *correct way* to think about curriculum. So, when asked, "For you, what is the curriculum?" their prescribed statements are based on their experiences and understanding of curriculum as discussed within their institutions.

5.2.1 Variation in Faculty Conceptions

The influence of institutional curriculum language is further evident when examining the variation that I have identified in faculty conceptions of curriculum. Before I continue, let me reiterate that, within phenomenographic research, the identified conceptions and the variation that exists between them are identified through the iterative examination of participant statements that have been pooled together, analyzed collectively, and disconnected from the individual research participants. When returning to the individual interview transcripts and identifying the conceptions expressed by a specific faculty member, it is possible to identify more than one conception expressed.

5.2.1.1 Variation – Curriculum as Subject-Content.

Viewing curriculum in terms of subject or content is well-established in the field of education. This is evident in the various definitions of curriculum presented within the literature of curriculum theory, with many authors defining curriculum in terms of the content or subject matter of a course of study (Bobbitt, 1924/1975; R. C. Doll, 1996; Kelly, 1977/2009; Lattuca & Shoemaker, 2020; Lattuca & Stark, 2009; Orlosky & Smith, 1978; Parker, 2003; Tyler, 1949/2013; Walker, 2002). While these definitions connect curriculum and subject matter, presenting their relationship as self-evident, they simply answer the question of 'what is curriculum?' and provide no additional insight into why faculty should view curriculum in the manner described. Nevertheless, despite not being curriculum scholars themselves and most likely not being familiar with any formal definitions of curriculum, faculty do conceive of curriculum as involving the content or subject matter of their courses – as demonstrated in my research outcomes (Chapter 4, Section 4.4.2). It is my argument, based on the statements made by faculty that align with the conception of *Curriculum is the Subject Matter to be Learned* and the outcomes identified in Section 4.7, that the institutional curriculum language they encounter influences their shared understanding of the concept of curriculum. This influence guiding faculty to viewing curriculum only in terms of the subject matter of the course. In examining this influence, I present what I believe to be a new understanding of the impact of institutional curriculum language on developing a shared

understanding of curriculum, thereby expanding the existing knowledge base related to faculty and higher education curriculum.

The framing of curriculum in terms of subject can readily be seen in the public-facing communications related to the courses or programs being offered at the polytechnic institutions. This includes the language that would be used in program and course descriptions on the institution's website or course catalogue, as well as other promotional and marketing materials. This subject-focused language is then reinforced within the discipline-focused conversations that faculty have with one another. For instance, when faculty discuss their assigned courses for the term, the simple answer of the course topic or subject is sufficient to answer the questions, "What do you teach?" or "What are you teaching this term?". This influence is evident in my first and least complex category, *Curriculum is Prescribed,* where the conception of curriculum focuses on the topic of the course(s) assigned to an instructor.

Institutional curriculum language is not limited to broad statements related to courses or programs. It expands, providing specific details of the KSAs and subject matter content that students are to learn to be successful in industry upon completion of the course or program. It specifies not only 'what' students will learn but also what resources will be provided to support their learning. This course-level curriculum is communicated to students and faculty through formal curriculum documents, such as course outlines, which specify the course learning outcomes and the required materials that students will use to learn. These materials include textbooks, industry standards documents, practice manuals, and government regulation documents. This more complex institutional curriculum language is evident in my two subsequent categories: *Curriculum is the Subject Matter to be Learned,* and *Curriculum is Structured*. Additionally, this institutional language is evident in the statements made regarding the mandated curriculum processes, as examined in Section 4.7.2, with subject-focused course learning outcomes frequently being the focus of institutional curriculum processes. I contend that this more detailed institutional curriculum language has the strongest influence on faculty in reinforcing the concept of curriculum as subject or content, as it is the language most

commonly used when faculty interact with curriculum in their roles as instructors.

Faculty adopt the institution's curriculum language as they engage with one another, their academic leaders, and institutional curriculum specialists in informal conversations and formal discussions about what they believe students should learn regarding the KSAs required in industry and the resources they should utilize. These KSAs are then described in formal course outlines as learning outcomes, which are constructed or written in accordance with the institution's formal policies and processes. Examples of these conversations and discussions can be found in Section 4.7, with participants discussing working with curriculum specialists in the institutions Centre for Teaching and Learning to write learning outcomes (RP 18), discussing the approval process for changing course learning outcomes (RP 9), sharing previous course outlines with other faculty (RP3), and the non-negotiable nature of the connection between formal course learning outcomes and instructional practices (RP3). These learning outcomes are used to identify and select common learning resources, such as textbooks or manuals, that support students and are also included in the formal course outline. This relationship between learning outcomes and instructional resources has a long and established history within modern education (Kelly, 1977/2009; Tyler, 1949/2013).

Faculty discussions also include decisions regarding supplementary learning resources used in the course. Theses may include items distributed on the institution's online learning management system (such as Brightspace or Moodle), or in the classrooms, such as PowerPoint slide decks, instructional videos found on YouTube, online learning resources provided by the textbook publisher, which may include videos, readings, interactive multimedia, or self-tests, as well as resources created by government agencies, industry organizations, or equipment manufacturers.

Faculty curriculum discussions may also occur as part of institutional quality assurance processes and involve staff from various departments within the institution. These processes serve to support both internal and external requirements and are outlined in Section 4.7.2, with examples of program

review for external accreditation (PR 4) and institutionally required mapping of learning outcomes to institutional outcomes (RP 3). These processes necessitate the use of institutional curriculum language to facilitate conversations and to avoid misunderstandings. Through engaging in these forms of communication, faculty are exposed to, learn, and incorporate this institutional curriculum language into their lexicon, which influences their conceptions.

5.2.1.2 Variation – The Separation of Curriculum and Instruction.

As the institutional language, in all its forms, focuses on the content to be learned, it separates course content from instructional practice and, in doing so, influences faculty to make the same separation. Other authors have noted this separation in their writings. Bali (2013) noted that course syllabi consist of a set of topics to be covered, but that these syllabi do not communicate "how exactly such a curriculum is to be implemented in classrooms" (p. 62). This separation is explicitly made evident by Kelly (1977/2009) in his presentation of *Curriculum as Content and Education as Transmission* models, thereby reinforcing that this perspective on curriculum is prevalent across higher education and broader curriculum studies.

In separating curriculum and instruction, institutional language disconnects the instructor from the student, making curriculum something that the students are responsible for. This separation of content and instruction is evident in the faculty conception of curriculum described in my second category, *Curriculum is the Subject Matter to be Learned,* as I outlined in the previous chapter (Section 4.4.2). While the existing literature has identified that this separation is present, my research outcomes lead to an even more significant concern: that this separation creates a barrier between the student and their acquisition of the knowledge, skills, or attitudes in the courses they are studying.

When given a course outline, or for all intents and purposes, a list of things the students need to learn in the class and not also receiving some form of instructor's guide or overview of recommended pedagogical practices, the instructor is highly likely to approach the curriculum from the content-instructor

focused viewpoint of "How do I teach this content to students?" and not from a more student-focused mindset of "How will students learn this?" or ideally "What learning experiences and opportunities can I create that will support all students in attaining these educational outcomes?". This content focused view of curriculum and its relationship to instruction can be seen in Section 4.4.4, where research participants refer to the prescribed course outline, with its list of learning outcomes, as a checklist to ensure that they teach all of the required content.

In short, the institutional language used to communicate curriculum to the faculty places the subject and KSAs of the course before and separate from the students.

5.2.1.3 Variation – Coherence of Curriculum.

In writing about the need for curriculum coherence in higher education curriculum design, Blackmore & Kandiko (2012) identified five aspects of curriculum that need to function together in a coherent and cohesive whole. These are content, process, learning outcomes, assessment, and pedagogy, with the learning outcomes providing a coherent structure to the collective curriculum components. My research suggests that, despite the need for these elements to function effectively together, faculty members do not share a common understanding of them. While each of these five aspects can be individually identified within the entirety of the outcome space presented in this thesis, the variation present demonstrates that for faculty teaching in polytechnics, these five aspects are not only disconnected, but also are not all present in the less complex faculty conceptualizations of curriculum. As evidenced by their prescriptive statements, faculty do not make connections between these different elements of curriculum, even though they were included in their descriptive accounts given when interviewed.

In missing those connections, they do not integrate the elements into a more complex or sophisticated conception of curriculum, as evidenced by their simpler definitions that echo the curriculum language of their institution. Since polytechnic faculty are hired based on their industry experience rather than their

educational knowledge, they lack a frame of reference to structure a more complex conception of curriculum around, as evidenced by their descriptive statements.

However, a review of the conceptions presented earlier in this thesis (Chapter 4, Section 4.4) demonstrates that some faculty do integrate these elements of curriculum coherence into their descriptive accounts of curriculum. Therefore, the variation in faculty conceptions indicates that the five elements of curriculum coherence listed above are absent from the simplest conceptions of curriculum, present but disconnected within the slightly more complex conceptions shared when providing a prescriptive account of curriculum, and fully interrelated in the latter, more complex conceptions shared in descriptive accounts.

As faculty begin to develop more complex conceptions of curriculum, they no longer view curriculum as only being related to specific subject matter or the KSAs that students need to develop to be successful in industry. Their conceptions now include attention to various aspects of curriculum relating to its coherence, such as the structured order in which learning should occur, dictating the order and timing of the transmission of the KSAs, not only within a single course but across an entire program. This expanded view of curriculum is communicated and socialized via the institutional curriculum language associated with mandated curriculum policies and processes. Examples of which are outlined in Section 4.7.2. Specialized curriculum language and terminology are used institutionally and adopted by faculty to describe the curriculum across a program. Terms such as prerequisite, corequisite, and course map are used to describe the relationship between individual courses in a program.

As faculty conceptions become more sophisticated they reflect what Lattuca and Shoemaker (2020) describe as a more scholarly conceptualizations of curriculum. These scholarly conceptions of curriculum move beyond the content of an individual course and extend to include the design and practices related to learning the content within the course and can also refer to "the content of a set of courses that comprise a topic of specialization, a program of study, or an academic discipline" (p. 338), thus outlining the structure of what is to be

included in the courses, specializations, or program of study and the order in which it is to be completed. While Lattuca and Shoemaker (2020) attributed these more sophisticated conceptualizations of curriculum to a scholarly understanding of curriculum, my research indicates that faculty who are not curriculum scholars also conceive of curriculum in this way.

In addition to conceptualizing curriculum in a manner similar to curriculum scholars, the research participants in my study also employed specific educational language in their interviews. As I have previously mentioned, polytechnic instructors generally have not completed any formal educational or instructional training; yet, they employ the language of OBE, backward design, and constructive alignment, as described in the previous chapter. This necessitates the questions "How are faculty exposed to this language?" and "When are faculty being exposed to this language?". I would argue that if it is not through formal instruction, then one source of this curriculum language development is their exposure to it within their institution as they engage in curriculum work and curriculum conversations with other faculty.

This educational language can be found in and introduced to faculty via formal institutional policies and processes that are written using the language of OBE, requiring the use of the language of Bloom's Taxonomy (Krathwohl & Anderson, 2002) within the official course outline to express what learning will occur. These formal institutional processes, outlined in Section 4.7.2, include program-level quality assurance tasks, program and course curriculum design, and curriculum review activities. When programs undergo program curriculum review, either informally as a department or more formally as part of an institutionally mandated quality assurance process, faculty adopt the institutional curriculum language as they engage in discussions relating to aligning course learning outcomes to program learning outcomes and those program learning outcomes to current competencies needed or requested by industry. Within these discussions, the sequencing of courses within the program may be considered to improve coherence. For externally accredited programs, coherence as part of program curriculum review focuses on and is pressured by compliance with external accreditation requirements, as

exemplified by the statement made by Research Participant 4 in Section 4.7.2. As individual courses are reviewed, faculty engage in discussion related to course learning outcomes and objectives. They may discuss needing to update these to better align with changes in industry. When changes to the course learning outcomes are agreed upon, they need to be translated and written in a specific manner to be approved within the institutional curriculum governance procedures and then added to the formal course outline. An example of this necessity for writing learning outcomes in a specific manner can be seen in statements made by both Research Participant 3 and Research Participant 4 in Section 4.7.2, in which the reference the need to use Bloom's Taxonomy when writing course learning outcomes.

Further related to the language used in formal curriculum documents, faculty may be tasked with translating competency statements provided and required by external accrediting bodies into the formal language of learning outcomes, aligning with institutional processes and procedures.

The influence of this formal curriculum language, as evidence by its use by faculty, only explains the development of the more scholarly conceptions of curriculum as described by Lattuca and Shoemaker (2020). It does not explain how faculty come to conceptualize curriculum as being inclusive of teaching and assessment. I argue that the influence of the formal institutional curriculum language is replaced by more informal institutional curriculum language. This language is used in informal curriculum discussions involving faculty, academic leaders, and members of the institution's teaching and learning centre. These discussions may include conversations related to concepts such as signature pedagogies, assessment practices (including authentic assessment, rubric design, and formative assessment techniques), and other topics related to teaching and learning. As these discussions occur, faculty begin to conceptualize teaching and assessment as part of, and not separate from, curriculum, as these topics are frequently discussed in concert. Examples of these informal curriculum conversations can be seen in Section 4.7.1, in which faculty relate their experiences with curriculum as a specialized subject matter

Given that a significant number of research participants' prescriptive descriptions of curriculum were less complex than their descriptive statements (as identified in Section 4.6), I contend that as faculty develop more complex views of curriculum, formal institutional curriculum language, which serves to foster a common understanding of curriculum, becomes a barrier to faculty invalidating the views of faculty who view curriculum in the most complex ways. In other words, faculty who express conceptions of curriculum in the most complex ways do not recognize their understandings as being valid; instead, they give what they consider to be the 'correct' prescribed view of curriculum as presented by the formal institutional curriculum language. In these more complex conceptions, curriculum becomes an integral part of what instructors do, encompassing both teaching and assessing students. This view stands in contrast to the formal institutional subject-focused curriculum language, , as I outlined earlier in this chapter.

5.2.1.4 Variation – Curriculum and the Student.

The relationship between students and curriculum has been previously explored by numerous researchers and curriculum theorists, focusing on various aspects of this relationship. Some have examined the purpose of curriculum, with debates occurring "between the worlds of the practical and the academic, the sciences and the arts, and the dividing lines between doing and knowing." (Barnett & Coate, 2005, p. 38). Others have explored the role of curriculum in meeting the social needs of society through developing "proficiency in citizenship" (Bobbitt, 1918, p. iv). While others have examined how curriculum can be used to transform society or function as an emancipatory power to address the disadvantages that distinct populations experience within society (Barnett & Coate, 2005; Cliff et al., 2020; Lindén et al., 2017; Mäkinen & Annala, 2010; Pinar, 2004; Quinn, 2019; Roberts, 2015). Still others have written extensively regarding the tacit aspects of curriculum and its impacts on students. Usually framed as the 'hidden curriculum', this aspect explores how the curriculum replicates and reinforces dominant societal views and values through not only what is officially included, but also what is excluded from the curriculum (Ashwin et al., 2020; Bali, 2013; Barnett & Coate, 2005; Blackmore &

Kandiko, 2012; Boughey & McKenna, 2021; Bovill & Woolmer, 2019; Clegg, 2011; Ellis, 2004/2013; Kelly, 1977/2009; Mäkinen & Annala, 2010; Shahjahan et al., 2022; Stenhouse, 1975). While it is evident that there is significant literature relating to the relationship between curriculum and students, my research shows that only faculty expressing the most complex conceptions of curriculum consider this relationship.

As I stated in the prior section, as faculty conceptions became more complex, instruction and assessment are no longer viewed as separate concepts. Instead, curriculum is conceptualized as including both, along with the subject matter of their courses. It is only in the highest or most complex conception of curriculum, *Curriculum for Personal and Social Development*, that faculty integrate students as an integral aspect of curriculum. This conception is discussed in greater detail in the previous chapter (Section 4.4.5). Still, to reiterate the key characteristics of this highest level of curriculum conception, faculty are no longer focused solely on the technical learning outcomes associated with the specific subject matter, but also on the student's growth and future impact on society. This includes developing lifelong learning skills, interpersonal or teamwork skills, or broader issues related to inclusive teaching and any hidden curriculum within a course, program, or institution.

The influence of institutional language on faculty conceptualizations of curriculum, as it relates to student growth outside of the technical learning outcomes, is limited. However, it does appear in the form of initiatives expressed as institutional learning outcomes or graduate professional attributes, as well as special interest frameworks and institutional strategies communicated to faculty with the expectation that they will be implemented in some way within all programs' curricula. Within the current Canadian higher education context, this includes the Indigenization of curriculum in response to the *National Truth and Reconciliation Commission's Calls to Action* (Truth and Reconciliation Commission of Canada, 2015). These institutional initiatives only represent a small portion of the language used by faculty in describing curriculum in ways that align with this conception, with the majority of statements being expressed using terms not found in institutional documents.

Instead, in their interviews, the faculty members I interviewed used general terms related to the students' personal growth as individuals and citizens outside of the classroom, as well as their role and responsibility in designing learning experiences that supported this type of student growth. Additionally, some faculty used the academic concept of 'hidden curriculum', something not found in institutional documents, to describe their awareness of the unintentional impacts on their learners – discussing how this hidden curriculum reinforces the cultural norms, power structures, and biases of the profession, institution, instructor, and students.

5.3 Developing Curriculum Conceptions

So far, I have argued that institutional curriculum language influences how faculty think about curriculum. This is evidenced by the variation in conceptions described in my research, the differences in the descriptive and prescriptive accounts of curriculum shared by research participants, their experiences with curriculum as a specialized subject matter, and their experiences with institutional curriculum processes. Given that institutional curriculum language influences faculty views of curriculum, I would also argue that there is a need for faculty to develop an understanding of curriculum that is more complex than the institutional viewpoint. As I outlined in earlier chapters the vast majority of the research participants provided prescriptive accounts of curriculum that aligned with the third level of conception described in the outcome space, *Curriculum is Structured*. This indicates that they do not view curriculum in the most complex or sophisticated ways. To support this argument, I will use the remainder of this chapter to outline how less complex conceptions of curriculum may negatively impact student learning and why faculty need opportunities for professional development related to educational practice. I will also outline why faculty need opportunities and space to engage in robust curriculum conversations in addition to professional development.

5.3.1 The Problem with Less Inclusive Curriculum Conceptions

In my view, 'curriculum' is a term that encompasses the relationship between students and the knowledge, skills, and/or attributes they need to succeed, not

only in the subject they are studying but also as individuals in other aspects of their lives. This view contrasts with institutional curriculum language used by the research participants, which limited 'curriculum' to being viewed primarily in terms of the prescribed subject matter delivered to students and that they must learn. As such, it is a barrier to faculty understanding their role serving as the intermediary mechanism between the student and the intended (and unintended) KSAs developed by the student. As Quinn (2019) argued, faculty in higher education who view curriculum as a list of topics to teach are reluctant to understand the role that curriculum plays in distributing access to knowledge and knowing. Whereas faculty with a more complex understanding of curriculum view it as including not only the content of the subject matter, but also the ways it is taught and assessed, the person doing the teaching, and the person doing the learning.

There are several reasons that the issue of faculty viewing curriculum in less complex ways needs to be addressed. As evidenced by my first category of description, *Curriculum is Prescribed*, instructors who view curriculum as being subject-matter content prescribed by the institution or by an accrediting body are likely to take the curriculum and any associated components, such as skills, learning outcomes, competencies, textbooks, etc., as sacrosanct, feeling that they are responsible for ensuring that all of the content is delivered 'as-is' using the resources provided and within the time frame given for course delivery. Feeling driven by the curriculum and the limited time to deliver it, these instructors may not take the time to adjust the pacing of their instruction to allow students who may be struggling with developing the skills or understanding the concepts, leaving students to struggle on their own and fall behind. An example of this way of thinking can be seen in the quote from Research Participants10, in section 4.4.4, in which they make reference to need to get through all of the content of the course outline before the final exam. Instructors who do not understand their connection or role in the student-KSA relationship may place the responsibility for students' success or their lack of success solely on the student. Viewing themselves as the subject matter expert responsible for delivering the content, and if they have taught the curriculum exactly as prescribed, the issue of poor student performance rests with the student. The

instructor has done their job as they see it. Additionally, instructors with this view of curriculum may be unaware of the impacts of the implicit or hidden curriculum embedded in the prescribed curriculum or enacted within their classroom environment, as described in the final category of description, *Curriculum for Personal and Social Development*. This lack of awareness may be harmful to students in their classrooms who are members of equity-deserving groups, such as international students, Indigenous students, and 2SLGBTQA+ students, among others. These issues may lead to higher numbers of students either failing or withdrawing from the course and potentially the entire program. This view of curriculum leads to instructors who Kelly (1977/2009) described as having a professional image as educational technicians rather than educators, delivering the curriculum product in a consistent and replicable manner, achieving the goals of education as first articulated by Bobbitt (1918) and later by Tyler (1949/2013) and Kelly (1977/2009). This view of curriculum as a replicable product continues to be identified and described in higher education, as evident in the works of Mäkinen & Annala (2010), Bali (2013), and Cliff et al. (2020).

A further reason for concern about the limitation of faculty understanding of curriculum is its impact on the instructional approaches used by faculty to support the student-KSA relationship. Being hired direct from industry, polytechnic faculty enter their teaching roles having received no formal education about pedagogical best practices. Their understanding of these practices is based on their experiences as students before entering their profession and any professional development they have undertaken while working in their profession. As such, their instructional approaches are likely based on their experiences as learners, with them more likely to select the same instructional approaches they experienced as successful learners while intentionally avoiding those that they do not believe helped them. This replication of their experiences as students and their self-image as subject matter experts leads to the proliferation of 'sage on the stage' and 'death by PowerPoint' instructional approaches. Furthermore, they may be more resistant to using newer scholarship-based instructional approaches, such as participatory learning or project-based learning, presented to them by either

their colleagues or educational developers tasked with improving the instructional skills of the faculty in the institution.

5.3.2 Why Does it Happen?

The question of why the institutional language of curriculum acts as a barrier to more complex and sophisticated ways of viewing curriculum needs to be addressed. I propose that its influence on faculty conceptions of curriculum is only possible due to faculty not being exposed to broader educational theory. This lack of exposure to curriculum can be seen in the work of Quinn (2019) and Lattuca and Stark (2009), which I referenced in Chapter 2. Quinn (2019) raises the concern that within higher education, there are differences between those who have some level of understanding of curriculum theory and those who do not. The latter views the nature of curriculum in less complex ways compared to the former, which is a concern, as I have outlined above. Reflecting on their experiences in asking faculty to define curriculum, Lattuca and Stark (2009) state that faculty who have been assigned curriculum development responsibilities include more elements in their curriculum definitions than those faculty who do not have these responsibilities. Though they do not explicitly state why involvement in curriculum development activities leads to more complex views of curriculum, I interpret their statement to mean that this is due to these faculty being aware of more aspects of curriculum as they are responsible for navigating institutional curriculum governance processes and curriculum standards. This increased exposure to curriculum then leads to a more complex view of curriculum. However, simply being exposed to more aspects of curriculum is not sufficient to develop a more sophisticated curriculum view, as Lattuca and Stark (2009) identified that faculty,

> *seldom link the elements they mention into an integrated definition of the curriculum. They tend to think of separate educational tasks or processes, such as establishing the credit value of courses, selecting the specific disciplines to be taught or studied, teaching their subjects, specifying objectives for student achievement, and evaluating what students know. (2009, p. 2)*

In these two examples, it is evident that limited knowledge of curriculum is connected to less complex views of curriculum, a statement that intuitively makes sense. However, greater exposure to curriculum only within the context of institutional processes and the associated language can lead to a broader view but not a more sophisticated one.

Transitioning away from their subject matter expert roles working in industry, polytechnic faculty enter the teaching environment with varied backgrounds and teaching experience. I have already demonstrated that those factors do not impact the conceptions of curriculum held by faculty. I repeat this to emphasize that most instructional faculty are not curriculum scholars or theorists. As subject matter experts, they have not been exposed to broader curriculum theory, which encompasses more complex and sophisticated views of curriculum. Although they are actively involved in teaching their subjects, they have limited knowledge of pedagogy, assessment, and curriculum theory (Placklé et al., 2018). This lack of exposure to curriculum theory is not unique to the polytechnic environment, as university faculty also do not enter into teaching possessing an awareness or understanding of curriculum theory and practices (Fraser & Bosanquet, 2006). As a result of the absence of exposure to curriculum theory, faculty may not only possess a limited knowledge of curriculum theory, but they also may not been exposed to or applied the language of curriculum theory in discussion with others and in doing so, they would not have had the opportunity to incorporate more complex and sophisticated concepts into their views of curriculum.

5.3.3 The Need for Faculty Professional Development

As demonstrated in the previous chapter, neither the academic background nor the number of years of teaching experience appears to influence or impact how faculty view curriculum. Additionally, I have argued that the influence of institutional language lessens as faculty conceptions become more complex and sophisticated, as evidenced by the variation in the outcome space. As I described in Section 4.8, during the interviews, some faculty adopted and used educational language when relaying their accounts of curriculum, demonstrating a more complex view of the curriculum. Examples of this language include

references to Bloom's taxonomy, backward design, and hidden curriculum. I am left with the question of how faculty develop this more sophisticated and complex view of curriculum. As I discussed in Section 4.8, upon reviewing the interview transcripts I noticed that several of the research participants mentioned learning about teaching, learning, assessment, and curriculum theory through participation in professional development activities. As I stated in the previous chapter, I define professional development as a faculty member's engagement in learning activities that increases their awareness, knowledge, skills, and attitudes related to a targeted competency in their profession. Within the context of faculty developing as educators, these learning activities may include scholarship-informed teaching, educational workshops, attending educational conferences, formal educational courses or programs, or coaching by educational developers or more experienced colleagues that expose faculty to a broader and deeper understanding of curriculum. Professional development directly related to curriculum theory is necessary for faculty to successfully undertake curriculum work, make informed curriculum-related decisions, increase effective communication with colleagues and academic leaders, and ultimately improve student learning outcomes.

Curriculum is central for faculty in their roles as educators, and, as I have demonstrated thus far, faculty experience and view curriculum in different ways and to differing degrees of complexity. I would argue that regardless of their conceptions of curriculum, all teaching faculty are engaged with curriculum in some way. Whether it is simply 'delivering' it as a product, interpreting it to plan learning experiences or assessments, making changes to it, reporting on it, creating it anew, discussing it with colleagues or academic leaders, etc., faculty are working with curriculum regardless of the complexity of their understanding of curriculum theory. Possessing a limited understanding of curriculum, this curriculum work can be particularly challenging for faculty (Quinn, 2019) as they "receive little or no training in curriculum design and planning" (Blackmore & Kandiko, 2012, p. 2) and curriculum expertise is not uniformly found across the higher education sector. Faculty may even lack access to expertise within their institutions (Boughey & McKenna, 2021). Regardless of whether or not curriculum expertise is available, faculty rarely access the curriculum theory and

educational research that is accessible to them (Fraser & Bosanquet, 2006), and therefore, when doing curriculum work, their decisions are not necessarily "grounded in ideas that form a coherent and systematic body, a curriculum theory" (Walker, 2002, p. 215). This absence of knowledge of curriculum theory, "includes philosophical orientations to the curriculum; the purposes of the curriculum, that is, what students need to learn to become particular kinds of knowers; the relationship between curriculum content, pedagogy and assessment" (Quinn, 2019, p. 9). Therefore, professional development is needed for the primary activity of teaching faculty in higher education, supporting students in their educational journey. As succinctly stated by Carnell and Fung, "If we value teaching programmes and care about their quality, we must value the work of faculty in curriculum design and educational development" (2017, p. 42).

Earlier in this chapter, I described the variation that exists in faculty conceptions of curriculum and the influence of institutional curriculum language on the ways faculty view curriculum. While this institutional language leads faculty to view curriculum in a limited manner, it does influence faculty towards developing a view of curriculum that is more complex than the simplest conception that I identified in the outcome space, *Curriculum is Prescribed*. This development is evident for faculty to view curriculum in an ordered, coherent way. Within their classrooms, instructors holding this institutionally supported view apply it as they organize their courses, select necessary learning resources, and choose the learning experiences in which learners will participate. These instructors recognize that the subject matter to be learned must be structured in a manner that supports students' effective achievement of the learning outcomes. Learning experiences are chosen for how they scaffold the KSAs across the length of the course, including the identification of the subset of KSAs that need to be developed to achieve the learning outcome. They are aware that the learning goals for students are expressed in terms of formal learning outcomes, which are communicated through a course syllabus or course outline. Furthermore, they have at least an introductory understanding of the three different taxonomies of learning and their associated levels of complexity or difficulty. With this understanding comes an awareness of the different verbs

used in constructing the learning outcomes and their relationship to what is expected of learners.

Institutional curriculum language alone does not support faculty in developing this view of curriculum. For an instructor to view curriculum in this way and to have this low-level understanding of educational theory and practice requires that the instructor have had the opportunity to learn these concepts. This learning could occur through personal professional development, completing formal educator training programs, or through the support of educational developers within their institution. With this knowledge of educational theory, instructors can support curriculum change within their courses by updating existing learning outcomes and writing new ones as needed. Additionally, instructors will understand the role of their course learning outcomes in relation to other courses within the program and the overall program learning outcomes. An example of this would be understanding if their course serves as a prerequisite course for courses that come later in the program, or conversely, which courses are prerequisites for students before entering their course. With this knowledge of educational theory, instructors possess the curriculum language necessary to engage in discussions with their academic leaders and other instructors relating to the course structure and student progression through the program.

An understanding of educational theory relating to the structure of learning and the construction of learning outcomes is insufficient for faculty to understand the relationship between curriculum content, pedagogy and assessment. To achieve this, faculty need to view teaching and assessment as components of curriculum, and with this, they need an awareness of the relevant educational theories. This view of curriculum includes the instructors as an integral part of the curriculum, actively teaching the subject matter and assessing students' achievement of specific learning outcomes. Less complex conceptions of curriculum place the responsibility for student learning squarely on the student. However, instructors who conceive of curriculum as being taught and assessed recognize that they are a component of curriculum and student learning, as well as the successful completion of assessments. Student achievement is viewed

as a shared responsibility, in which the pedagogical practices chosen by the instructor serve to provide experiences that enable students to develop the necessary KSAs.

For this to occur effectively, instructors must possess more than a foundational understanding of learning taxonomies. They need additional knowledge relating to the teaching-learning process. Their pedagogical practices need to be informed by curriculum theory that supports their choices for the structure of the learning experience. This curriculum knowledge includes concepts such as constructive alignment of learning outcomes, instructional resources and activities, and assessments (Biggs, 1996). There is also a need to understand backward design principles, planning decisions that begin with the learning outcome, followed by aligned assessments, and then planning learning experiences that support students in developing the necessary KSAs to successfully demonstrate the learning outcome (Wiggins & McTighe, 2006). In planning the learning experiences, instructors need to have knowledge of effective instructional techniques to be applied to support student learning. Lastly, an understanding of formative and summative assessment practices is needed, the former serving to adapt and adjust the instructional decisions to better meet student needs. The above are the types of knowledge and practices needed for instructors to successfully achieve the educational responsibilities of their instructional role.

Just as having a foundational understanding of learning taxonomies requires instructors to have the opportunity to learn the concepts, the above types of educational knowledge require exposure through professional development to learn and then apply. Again, this development occurs through personal reading, formal educational training, or the support of educational developers in their institutions. Without this knowledge, faculty may struggle to identify effective ways to support their students. Instructors who already possess this knowledge may implement innovative practices of their own, approaching the improvement of student performance from a scholarly perspective and, in doing so, engaging in the scholarship of teaching and learning (SoTL).

As faculty engage in professional development, they may begin to develop a view of curriculum that is both complex and sophisticated, as described as the highest level within the outcome space. With this advanced view of curriculum, they view student growth beyond the discipline-specific context of their course, with student growth and success, including those KSAs that help them grow as contributing members of society. In conceiving of curriculum in such a way, these faculty have little trouble adapting broader institutional outcomes, graduate competencies, decolonization initiatives, or industry-sought soft skills such as teamwork, independent problem solving, etc., which may not be captured in formal learning outcomes. Additionally, as they are aware of hidden or tacit curriculum, they are able to reflect on their classroom and the experiences of students who are members of equity-deserving groups. They recognize that they are learners as well as their students. These faculty exemplify what can be described as student-focused educators.

The need for professional development related to educational and curriculum theory extends beyond student learning within faculty classrooms. The absence of knowledge of curriculum theory within higher education faculty results in faculty lacking a shared understanding or conceptualization of curriculum. Bovill and Woolmer (2019) identify this lack of shared understanding, calling for more clarity from educational practitioners in how they define curriculum. Without establishing a common understanding of curriculum, faculty do not possess a common language for discussing curriculum, which negatively impacts the efficacy of the program in which the faculty teach. It can negatively impact the implementation of curriculum development and change (Fraser & Bosanquet, 2006; Ratcliff, 1997). Additionally, the absence of a shared understanding of the curriculum may have a negative impact on the effectiveness of curriculum discussions. As Barnett and Coate (2005) stated:

> *If individuals do not have an explicit concept of the curriculum, if the idea of curriculum is itself open-ended, if we do not yet have an academic culture that is collectively concerning itself with curriculum matters, then simply opening up spaces for discussion is not enough. The discussion has to be engendered, and engendered perhaps without*

> *using the term 'curriculum' for its sheer use is liable to be counter-productive. (2005, p. 156)*

There are also potential negative impacts resulting from a difference in understanding. Writing about a lack of a shared definition of curriculum within higher education, Lattuca and Stark (2009) state:

> *The lack of a definition does not prevent faculty members, curriculum committees, deans, academic vice presidents, instructional development specialists, institutional researchers, and teaching assistants from regularly making decisions about curricula. These individuals talk about "curriculum" with the untested assumption that they are speaking a shared language. This illusion of consensus becomes a problem when groups with different views come together to work for curricular improvement. In such circumstances, participants often argue from varied definitions and assumptions without spelling them out, particularly in working groups that include many disciplines. Such discussions can be frustrating and even grow contentious. For these and other reasons, curriculum development or revision is typically not a popular task among college faculty. (p. 3)*

As faculty engage with professional development in curriculum they may begin to pay greater attention to curriculum theories, increase collaboration with colleagues who have a shared understanding of curriculum, engage in robust curriculum conversations, and may begin undertaking a more scholarly approach to curriculum, evaluating their students' experiences with the curriculum. In doing so, they move beyond the role of educational technician, as described by Kelly (1977/2009), simply delivering predefined content, move towards a more professional role as an educator and begin to consider the relationship between content knowledge and their students (Blackmore & Kandiko, 2012; Bovill & Woolmer, 2019; Lindén et al., 2017). In applying a scholarly approach to the curriculum, faculty can develop a critical understanding of their learners' experience with the teaching, learning, and assessment of the curriculum and thus have a meaningful impact on study learning through identifying curriculum issues, opportunities for integration of

concepts across the learning experience, and ensuring curriculum coherence (Blackmore & Kandiko, 2012). Further research into the impact of curriculum focused professional development is thus needed to examine its effectiveness in developing instructional faculty's conceptions of curriculum.

5.3.3.1 More Than Simple Participation is Needed.

As I outlined earlier, faculty involved in curriculum work and who have more experience in curriculum development include more elements in their definitions of the curriculum than faculty who have less experience with curriculum development (Fraser & Bosanquet, 2006; Lattuca & Stark, 2009). I would argue that simply doing more curriculum development alone does not improve faculty knowledge of curriculum. Nor does simply participating in professional development activities. It is the meaningful reflection undertaken during and after these learning experiences that improves faculty knowledge. Put another way, when tasked with curriculum work, faculty undertake an exploration of what it is that they need to do or how to best complete curriculum work. This exploration may involve engagement with instructional designers or educational developers situated within their institution, conversations with more experienced faculty members, or personal research via books, websites, YouTube, or workshops offered by their institution's Centre for Teaching and Learning. For some, their interest in curriculum may lead them to completing formal educational programs. These educational programs may include attending curriculum-related conferences and seminars or completing micro-credentials (digital badges), certificates, diplomas, or degrees.

I echo the argument of Barnett and Coate (2005) that what is needed is for faculty "to be involved in curriculum matters at some level of reflection" (p. 158) and that "engaging in curriculum projects … and even designing new curricula are fine in themselves, but ultimately that kind of busy-ness, worthwhile as it is, has to be accompanied by more reflective modes of being in relation to curriculum matters" (p. 159). As faculty learn more about curriculum, regardless of the source of this new knowledge, faculty need to reflect on what they have learned. It is this reflection that enables faculty to not only increase their knowledge of curriculum theory but also to incorporate it into their conceptions

126

of curriculum. To paraphrase a key idea from John Dewey's seminal work, *How We Think* (Dewey, 1910/2011)*,* faculty do not learn from their experiences working with curriculum and being exposed to curriculum theory; their learning occurs from reflecting on those experiences. I suspect that faculty with greater experience with curriculum work were able to learn more about curriculum theory, resulting in curriculum work becoming less challenging over time. If faculty cannot learn more about curriculum through their efforts, they will continue to find the work challenging and will be less likely to undertake curriculum work in the future.

5.3.4 The Need for Space for Curriculum Conversation

Another opportunity for faculty to develop more complex and sophisticated conceptions of curriculum is the space to engage in robust curriculum conversations. Research into faculty conceptions of teaching and learning has demonstrated that providing opportunities for individuals to discuss and clarify their conceptions while being exposed to the alternative conceptions of their colleagues is a primary step toward changes and development in practices (Trigwell, 1995; Trigwell & Prosser, 1997). Building on this, Åkerlind and Jenkins (1998) argued that "providing structured opportunities and encouragement within departments for discussion of teaching issues amongst staff becomes essential to the overall improvement of teaching and learning" (p. 287). I suggest that just as this is the case with developing faculty's conceptions of teaching and learning, similar outcomes would result from providing faculty with structured opportunities to discuss conceptions of curriculum through curriculum-specific experiences in which robust dialogue occurs. These experiences may include faculty participation in school or institutional curriculum review councils, developing new courses and programs, and attending and participating in curriculum-related conferences and conference presentations. Each of these experiences provides space for faculty to interact with other educational professionals who may or may not be instructors. The dialogue that would occur in these spaces would help achieve the need identified by Bovill and Woolmer (2019) for faculty to develop clarity around

their conceptualizations of curriculum while being respectful and open to the curriculum ideas of others.

5.4 Chapter Summary

In this chapter, I have demonstrated how the three research outcomes identified during the qualitative data analysis advance the understanding of higher education faculty conceptions of curriculum in a manner that is not situated within a subject-specific context, and in doing so, contribute to the body of knowledge in curriculum research. To achieve this, I have presented two arguments relating to the research outcomes. My first argument is that institutional language related to curriculum influences faculty conceptions of curriculum. This argument is supported by examining the variation in the outcome space generated as a result of my phenomenographic research, the differences between the descriptive and prescriptive descriptions of curriculum shared by the research participants during their interviews, faculty curriculum experiences with curriculum as a specialized subject matter, and their experiences with mandated curriculum processes.

In my second argument, I outline the need for faculty to develop more complex conceptions of curriculum. To support this argument, I outline the negative impacts that may result from faculty viewing curriculum in less complex ways, explain how institutional language influences faculty, and propose two necessary actions to mitigate this influence. The first is for education-related professional development opportunities and spaces for faculty to engage in robust curriculum conversations. I argue that curriculum-related professional development, including curriculum theory, is essential for faculty to undertake curriculum work successfully, make informed curriculum-related decisions, enhance effective communication with colleagues and academic leaders, and ultimately improve student learning outcomes. The second action I call for is the need for opportunities and space for curriculum conversations, allowing faculty to clarify their conceptions of curriculum and hear others' alternative conceptions. This approach has been demonstrated to be effective in supporting faculty in developing their conceptions of teaching and learning.

The following chapter concludes this thesis. In it, I summarize the research outcomes, outlining how they answer my three research questions. This is followed by an explanation of how my research makes an original contribution to the understanding of how faculty perceive curriculum. Additionally, I reiterate the key elements of this chapter, providing an overview of the three arguments I have presented. Following this overview, I reflect on my use of phenomenography and the resultant research outcomes, outlining the limits to the truth claims I have made in this thesis. Next, I outline the implications for practice that arise from the conceptions presented in the outcome space. I conclude the chapter and thesis with my final thoughts and provide a path towards further research opportunities.

Chapter 6: Conclusion

6.1 Introduction

At the outset of this thesis, I identified that while the term 'curriculum' is frequently used within various contexts in higher education, the term itself is ambiguous. As such, faculty teaching in higher education conceive of it in different ways. Very little research has been previously conducted that examined the conceptions of faculty as it relates to their experiences with curriculum, and what research has been done has only examined this within university contexts (Fraser & Bosanquet, 2006; Phan et al., 2016; Roberts, 2015). To date, no research has been published that explores this issue within the context of Canadian polytechnic institutions. This is of note due to the unique role that polytechnics have within the Canadian higher educational sector, as well as their unique programming that includes certificates, diplomas, and undergraduate degrees as well as skilled trades apprenticeships and diplomas that are vocational in nature. My research study sought to answer the following research questions:

RQ 1 – How do faculty teaching in Canadian polytechnic institutions conceptualize curriculum?

RQ 2 – What relationships exist between faculty members' understandings of 'curriculum' and their academic credentials or years of teaching?

RQ 3 – Are instructional faculty's descriptive accounts of curriculum qualitatively different than their prescriptive accounts?

6.2 Answering the Research Questions

To answer the research questions, I employed a phenomenographic research methodology, qualitatively analyzing the data collected from 18 semi-structured interviews with faculty members teaching in various programs at four polytechnic institutes in Alberta, Canada. This iterative analysis of the participants' delimited statements resulted in a hierarchical phenomenographic outcome space, comprising five increasingly complex and sophisticated categories that describe the phenomenon of curriculum as experienced by

130

faculty in polytechnic institutions in Alberta, Canada. A visual representation of this outcome space is provided in Figure 4.1.

6.2.1 Variation in Faculty Conceptions of Curriculum

The identified phenomenographic space answers the first research question, outlining the qualitatively different ways that polytechnic faculty conceptual curriculum. The five categories of description that describe the range of ways that faculty conceptualize curriculum are:

1. *Curriculum is Prescribed* – being composed of the required elements or components, both at the course and program level, that are mandated by the institution or other external bodies. Faculty members have little to no autonomy in making curriculum decisions, while being held accountable for adhering to the prescribed curriculum.

2. *Curriculum is the Subject Matter to be Learned* – being composed of the KSAs that students are expected to learn or develop, in preparation for the roles students will enter in industry upon their graduation from the program.

3. *Curriculum is Organized and Structured* – in which the coherence of the curriculum, including all of its internal elements, is structured logically. This structure organizes the learning that will occur throughout each stage of the learning experience, both within individual courses and the entire program.

4. *Curriculum is Taught and Assessed* – in which faculty's professional practices, including their instructional and evaluation practices, are planned and selected to support students in learning and demonstrating achievement of the formal learning outcomes.

5. *Curriculum as Personal and Social Development* – in which the instructional practices of the faculty are related to the personal and social development of the students, often beyond the formal learning outcomes and subject matter of the course. This development supports students throughout their studies, careers, and personal lives, extending beyond their educational and professional pursuits.

6.2.2 The Influence of Academic Background and Teaching Experience

I was able to answer my second research question by comparing the highest level of conception expressed by the research participants with their academic background and teaching experience. I was able to examine if there appeared to be a relationship between these influences and the conceptions expressed by faculty members. The results of these comparisons are presented in Table 4.3 and Table 4.4. Contrary to my initial thinking that the more education faculty had completed and the longer they had been teaching, the more sophisticated or complex their thinking would be regarding curriculum. My analysis suggests that this is not the case, and there does not appear to be a relationship between academic background, teaching experience, and faculty conceptions of curriculum.

6.2.3 Differences Between Descriptive and Prescriptive Accounts

My third and final research question was examined through comparing the highest level of conception expressed by research participants during the main body of their interview, when they were discussing their experiences with a specific focus on curriculum, and the highest level of conception that they expressed when I asked them directly what they believed curriculum to be, or in other words when they provided prescriptive descriptions of curriculum. The results of this comparison, presented in Table 4.5, indicate that there is, in fact, a difference in how faculty conceive of curriculum in these two distinct contexts. The majority of participants expressed less complex conceptions of curriculum when asked to provide a prescriptive description, as compared to their descriptive accounts.

6.3 Contribution to Knowledge

Within this thesis, I have argued that there is a lack of research on curriculum in higher education, and that the existing research has primarily focused on subject-specific curriculum. Curriculum, as a general concept, free of subject-specific context, has largely been ignored. There have been very few researchers who have examined how faculty in higher education conceptualize the term 'curriculum', with only Fraser and Bosanquet (2006) taking a

132

phenomenographic approach to identify variations in how faculty in an Australian university conceptualize curriculum. Additionally, at the beginning of this thesis, I stated despite its ubiquitous use in higher education, the meaning of the term 'curriculum' was ambiguous. This lack of shared understanding has been identified previously by various authors (Annala et al., 2016; Barnett & Coate, 2005; Boughey & McKenna, 2021; Bovill & Woolmer, 2019; El-Astal, 2023; Ellis, 2004/2013; Fraser & Bosanquet, 2006; Kelly, 1977/2009; Lattuca & Shoemaker, 2020; Phan et al., 2016; Pinar, 2004; Quinn, 2019; Smith, 1996/2000; D. F. Walker, 2002). While this thesis examined the ways in which instructional faculty conceptualize curriculum within a unique context within global higher education, the Canadian polytechnic institution, the research outcomes presented expand the understanding of how instructional faculty in higher education may perceive or experience curriculum regardless of the institutional context of their instructional practice. My research has outlined the distinct ways in which faculty may conceptualize curriculum, described the structural relationship between these various conceptions, and identified the primary factor that influences these faculty conceptions. In doing so, it validates the previously identified ambiguous nature of the term 'curriculum' among higher education faculty, while also presenting a new way of understanding how faculty may experience curriculum at any higher education institution, and as such provides a framework for future researchers to apply to their own research into the ways faculty conceptualize curriculum, similar to the way that Phan et al. (2016) applied the outcome space identified by Fraser and Bosanquet (2006). Additionally, in identifying institutional curriculum language as an influencing factor in faculty conceptions of curriculum, this thesis presents a pathway for future research into the influence of institutional language in how faculty conceive of not only curriculum but potentially other aspects teaching and learning in higher education. In these ways this thesis makes an original contribution to the field of higher education curriculum research.

Fraser and Bosanquet's (2006) research provided the first identification of the variation that exists in the ways that faculty in higher education understand or experience curriculum, presenting four qualitatively different ways in which academics conceptualize curriculum: as the structure and content of a unit and

of a program of study; as a process and structure that enables student learning; as a dynamic and interactive process of teaching and learning. Examining faculty conceptions within Canadian Polytechnics, the research presented in this thesis offers additional insights into how faculty in higher education conceptualize curriculum. While there are similarities between three of my categories of description and those of Fraser and Bosanquet (2006), two of my categories of description identify new faculty conceptualizations of curriculum. Conceiving of curriculum as being prescribed by others and as something over which they have no control appears to be unique to the polytechnic context. Whereas, in the university context, faculty seem to have sufficient academic autonomy to make independent curriculum decisions. Additionally, conceiving of curriculum in terms of the personal and social development of students, from their time as students to their careers and personal lives, offers a unique insight into the role of curriculum beyond the formalized learning outcomes of a course or program. This demonstrates that some faculty view curriculum in sophisticated ways that reflect the curriculum theories and classifications presented by academics, which describe the social justice, personal empowerment, hidden, and transformative aspects of curriculum. These two novel conceptions expand our collective understanding of faculty conceptualizations of curriculum.

This research study further contributes to our understanding of the factors that influence how faculty conceptualize curriculum. Like Fraser and Bosanquet (2006), this research demonstrated that teaching experience does not appear to influence faculty conceptualizations of curriculum. However, it also demonstrates that the academic background of faculty, a previously unexamined factor, does not appear to influence their conceptions of curriculum. While these two factors do not appear to influence faculty, this thesis presents a new factor that does impact faculty conceptions and that should be considered when discussing or researching this topic – the institutional curriculum language. By outlining the three ways in which institutional curriculum language affects faculty conceptions, this thesis adds to our understanding of curriculum within higher education.

6.4 Synthesis of the Discussion

Informed by the answers to my research questions or research outcomes, I presented two arguments. Firstly, I argue, as evidenced by the variation in faculty conceptions of curriculum and the differences between prescriptive and descriptive accounts of curriculum, that institutional curriculum language influences faculty conceptions of curriculum. Institutional curriculum language is codified and enacted in institutional policies, procedures, and other formal documents, and then reinforced through the casual conversations and formal discussions faculty engage in related to curriculum. This institutional influence then serves as the foundation of the institution's curriculum culture, establishing a common understanding of curriculum. In my second argument, I outline the need for instructional faculty to develop more complex conceptions of curriculum. To support this final argument, I outlined the negative issues I believe can result from faculty conceiving of faculty in less complex or sophisticated ways. I propose that this can be mitigated through curriculum-related professional development, as well as by providing faculty with space and opportunities to engage in robust curriculum discussions.

6.5 Reflecting on My Research Experience

This study was the first time that I have used phenomenography as both a theoretical lens and methodology. As this thesis represents the culmination of my research process, I must reflect on my experiences with phenomenography and the outcomes of my final research. All research methodologies adopt a particular ontological and epistemological position, and with that, the truth claims made by the research are framed by those views. As such, I recognize the non-dualistic positioning of phenomenography, noting that the reality of my research participants' experiences of curriculum lies between their thoughts and my interpretation of the statements they made. As such, despite my attempts to bracket my understanding and personal experiences with curriculum in higher education, I cannot state with absolute certainty that my views did not influence my analysis. That being said, as a non-dualist approach, phenomenography does not claim that the outcome space is definitive, nor does it make claims to correctness. The reality of experiences with and understanding of curriculum is

interpreted through my own experiences and understanding of curriculum; as such, other researchers' analyses of the same interview transcripts may identify a different outcome space, with different conceptualizations and different referential and structural aspects.

As I am aware that my experiences and understandings relating to curriculum cannot be fully eliminated through my conscious attempts at bracketing my views, it is incumbent on me to critically reflect on the research process from the perspective of the researcher. In doing so, I am aware that my position may have influenced my research outcomes. The influence being that, as a researcher, I am a curriculum scholar and a higher education faculty member whose professional duties involve working with other faculty to improve what they view as curriculum. This means that I had already been exposed to a wide variety of different conceptualizations of curriculum from the literature, the policies and processes of my institution, and from the faculty. This may have impacted me while I was identifying the delimited statements from the interview transcripts to establish the pool of meanings that I then analyzed to form my eventual outcome space. The impact being that I may have selected a broader range of statements that someone without my background may have selected, which in turn resulted in a broader outcome space.

In addition to the general limitations of phenomenographic research described above, my study has limitations that stem from conducting the research independently. Traditional methodologies used to strengthen the credibility of phenomenographic research, such as coder and dialogic reliability checks, are more challenging in solo research; however, they are not impossible. To mitigate this limitation, I engaged my PhD supervisor, an experienced phenomenographic researcher, in regular reviews of my analysis. These reviews occurred after each stage of analysis, as well as after each iteration during my fourth stage of analysis.

6.6 Implications of the Research Outcomes

This thesis has expanded the breadth of our understanding of faculty conceptions of curriculum beyond what was previously seen as the content,

structure, and teaching-learning aspects of the educational process that occurs within higher education institutions. In addition to contributing to the academic understanding of how higher education faculty conceptualize curriculum, the new insights outlined above have significant implications within higher education. These implications affect not only faculty but also students, institutional staff, and academic leaders. The variation in faculty conceptions of curriculum presented in this thesis does not exist in isolation. Instead, the decisions and behaviours made by faculty are influenced by their conceptions of curriculum, as well as the conceptions of others with whom they engage in curriculum-related discussions and activities. All of whom are influenced by the institutional curriculum language and its resultant curriculum culture. I will outline the potential implications of this influence in the following sub-sections.

6.6.1 Novel Faculty Conceptions of Curriculum

In the first new conception of curriculum described above, *Curriculum is Prescribed*, faculty view the mandated nature of the topic, content, or KSAs as having precedence over specifics of the content itself. This variation of focus is significantly different from the next level of conception, *Curriculum is the Subject Matter to be Learned,* placing compliance ahead of the content. There are several potential implications related to faculty adopting this focus.

Difficulties may arise when faculty feel that there is too much content to cover within the number of instructional hours allocated for the course. Viewing it as their responsibility, first and foremost, to deliver the curriculum as prescribed, these instructors may face unwanted stress and negative impacts on their mental health, which in turn may lead to professional burnout. This frustration may be exacerbated by institutional curriculum initiatives that are announced with the expectation of being implemented in all programs. Examples of these initiatives include authentic assessment, Universal Design for Learning, work-integrated learning, and decolonization.

Furthermore, difficulties may also arise if faculty lack the necessary resources for students to learn the content or for them to teach all that is mandated. Suppose the instructor, upon being hired, expects that everything needed to

teach the course will be provided to them. In that case, they will become frustrated when they are asked to create curriculum elements that they feel should already exist. These elements may include lesson plans, learning resources, assessments, and other relevant materials.

Additionally, viewing curriculum as prescribed may lead to frustrations resulting from an instructor's view that they do not have the autonomy to make curriculum changes. They may feel that the curriculum focuses too heavily or too little on a particular aspect of the content, or that outdated curriculum concepts are present, or that there are gaps in the content. Feeling that they are expected to deliver a sub-par product and express their frustrations with the curriculum while teaching negatively impacts the students' opinions of not only the subject but potentially the program and institution as a whole. These instructors may find themselves irritated or experience interpersonal conflict with instructors who hold more sophisticated conceptions of curriculum, and who, in their view, are not following the curriculum as prescribed correctly.

The final implication of viewing curriculum as being prescribed is that it creates a situation where instructors may not perceive the need to grow and develop as educators, as they attribute any problems with student achievement to others, such as curriculum designers, students, and the curriculum itself. This, in turn, may lead to these instructors choosing to leave their teaching positions, or if they do continue to work as instructors, they may not actively seek out professional development opportunities related to teaching and learning, instead opting for professional development that only relates to their prior profession.

The second new conception of curriculum described above, *Curriculum as Personal and Social Development*, is a significant variation from the other ways faculty think about or view curriculum. Being so different, there is potential for tensions between faculty who express this view of curriculum and those who conceive of curriculum in other ways, particularly those who view curriculum as prescribed or as subject matter to be learned. Imagining the hypothetical faculty meeting described below may be helpful in visualizing this tension.

138

Following the end of the term, a small faculty group of ten individuals meets for an afternoon session in a boardroom with their academic leaders to discuss the past term. Topics range from scheduling and course teaching load to discussion of common challenges that instructors face and how to approach those issues in the future. Eventually, the discussion shifts to reviewing the formal course outlines that individual faculty members have identified as possibly needing updates to align course learning outcomes with the needs expressed by industry members who were surveyed during the previous term. In reviewing the survey results as a team, one instructor identifies that a significant number of survey responses indicated that they felt the program's students were lacking in executive function skills, specifically organization and time management. In this meeting, two instructors who hold this highest conception of curriculum suggest that the program add an additional course learning outcome to the courses that address these issues and others that may impact learners' transition to the profession. They recommend adding an outcome directly related to professionalism and then embedding it within the existing classroom resources and activities, as well as incorporating it as an assessment category in the program capstone project. The other instructors disagree with this addition. Some argue that there is already too much content in the course to teach, and these professional skills are not their responsibility to teach their student. Their responsibility is solely to develop the technical KSAs relevant to their field. Or in other words, they conceive curriculum as the subject matter to be learned. The other instructors who disagree with the addition of another learning outcome state, rather directly, that their program is accredited by a national regulatory body and, as such, they must only teach the competencies mandated by the accrediting body. These faculty conceive of curriculum as prescribed. As the discussion devolves into a full-blown argument, the academic leader tables the topic and states that they will decide on their own and inform the instructors of their decision at a later date. The instructors who wanted the additional outcome leave feeling frustrated that their opinions would most likely be ignored as they were outnumbered in the argument. The other faculty leave frustrated, feeling that they just spent a significant part of a meeting on a useless argument because professionalism isn't their job to teach.

This story, of course, is fictional, but the implications are simple to see. While all three arguments seemed valid from each group's perspective, this was primarily due to how they conceived of the curriculum in their program. One may argue that the three perspectives are valid from an external perspective. However, I would counter that unless all the faculty came to an agreed-upon and common view of what curriculum is, neither group is capable of seeing the validity of the other's position.

6.6.2 Influence of Institutional Curriculum Language

Earlier is stated that institutional curriculum language influenced faculty who had the simplest views of curriculum, guiding them towards understanding curriculum as more than the prescribed content of a course. In doing so, it establishes a common understanding of curriculum as the prescribed subject matter, expressed as course learning outcomes, and documented on formal course outlines associated with specific courses within various programs.

There are several implications of instructors conceiving of curriculum as the subject matter to be learned. Instructors who view curriculum as subject matter to be learned may focus solely on the KSAs as described in the course outline. This content-only focus may then impact how they view their role as instructors and the role of students in relation to the KSAs. These instructors view themselves as the subject-matter expert who are responsible for delivering the content, and the students being responsible for learning it, resulting in the instructor being unwilling to adjust the pacing of delivery to support students who are struggling with the content. Additionally, through focusing on the KSAs, which are directly connected to the needs of the industry or profession, instructors may not view it as their responsibility to support students in developing their academic, interpersonal, social, or professional 'soft skills', expecting the students to develop these on their own. This can be a concern for students who are lacking in executive functioning skills, study skills, group work skills, and conflict management, among other skills, due to either not having learned them prior to beginning the program or due to neurodivergence or learning disabilities.

In establishing a common understanding of curriculum as the prescribed learning outcomes of a course, institutional curriculum language formally separates instructional practices and assessment from curriculum, treating both as distinct concepts. The impact of this separation is that faculty do not understand the direct relationship between the knowledge the students are meant to gain and their pedagogical decisions. As I identified earlier in this thesis, new faculty have had limited experience with curriculum before being hired to teach at a polytechnic. However, through their experiences as students before entering their profession, they have experienced curriculum as subject matter to be learned. As such, this conception of curriculum is based on their experiences as learners, which in turn impacts their approach as instructors, with them more likely to select the same instructional approaches that they experienced as successful learners while intentionally avoiding instructional approaches that they do not believe helped them. This replication of their experiences as students and their self-image as subject matter experts leads to the proliferation of 'Sage on the Stage' and 'Death by PowerPoint' instructional approaches. Furthermore, they may be more resistant to using newer scholarship-based instructional approaches, such as participatory learning or project-based learning, presented to them by either their colleagues or educational developers tasked with improving the instructional skills of the faculty in the institution.

The final implication of the influence of institutional curriculum language is related to the potential barrier it creates for faculty to develop more complex understandings of curriculum, while simultaneously it may invalidate the views of faculty who already have this more complex understanding. The concerning impact of this impairment is that faculty will maintain a less inclusive conception of curriculum, and in doing so, limit their influence on student success. Whereas, faculty with a more sophisticated understanding of curriculum view themselves as integral to the curriculum, actively teaching the subject matter and assessing students' achievement of specific learning outcomes. Conceiving the curriculum in this way has several implications relating to students' learning experiences, instructional decisions, and the perceived quality of professional performance.

Less complex conceptions of curriculum place the responsibility for student learning squarely on the student. Instructors who conceive of curriculum in more complex ways recognize that they are an integral component of both curriculum and student learning. Student achievement is viewed as a shared responsibility, in which the pedagogical practices chosen by the instructor serve to provide students with experiences that help them develop the necessary KSAs. For faculty to develop a more complex view of curriculum and to be successful in their roles, they require additional knowledge related to the teaching-learning process. Their pedagogical practices need to be informed by curriculum theory that supports their choices in designing and enacting effective learning experiences. For faculty to acquire this more advanced educational knowledge, they must be exposed to it through professional development opportunities. As I mentioned previously, this development occurs through personal reading, formal educational training, or through the support of educational developers in their institutions. However, if faculty view curriculum in a less complex way, following the influence of institutional curriculum language, they may believe that they already understand curriculum and, as such, do not seek out or participate in professional development activities.

6.7 Concluding Comments

In summary, how faculty in higher education conceptualize the term 'curriculum' has a meaningful impact on their actions as teachers and colleagues. In demonstrating the various ways faculty experience curriculum within their contexts, my research shows that curriculum is not a singular phenomenon within higher education. Given its ubiquitous use within higher education, this variation is evidence of the semantic ambiguity present, meaning that it is highly likely that when faculty members discuss curriculum with their colleagues, leaders, and other institutional staff, no two faculty members think about curriculum in the same manner. This creates situations in which misunderstandings and disagreements can arise, leading to adverse outcomes for all parties involved.

My review of the existing literature reveals that the research and understanding of faculty conceptions of curriculum, independent of the specific subject matter

they teach, are limited, and there are opportunities and a need for further research. As phenomenographic research is context-bound and not intended to be replicable, opportunities exist for further research to be conducted in various higher educational contexts, including differences in the type of institution and geographic location. Additionally, opportunities exist for further research relating to higher educational faculty and curriculum. These opportunities include research to better understand the impact of institutional curriculum language. More specifically, research is needed to better understand how institutional curriculum language fosters a shared understanding of curriculum among not only faculty, but also all institutional staff engaged in curriculum work. Another area that needs further exploration is the extent to which institutional curriculum language acts as a barrier for faculty in developing a more sophisticated understanding of curriculum. Research is also needed to investigate the degree to which institutional curriculum language obscures and invalidates the views of faculty who already approach curriculum in more sophisticated ways. Further research into the impact of curriculum focused professional development is needed to examine its effectiveness in developing instructional faculty's conceptions of curriculum. Lastly, research is needed to examine if providing faculty with structured opportunities to discuss conceptions of curriculum through curriculum-specific experiences in which robust dialogue occurs results in the development of higher conceptions of curriculum. These further areas of research will contribute to the collective understanding of faculty experiences with curriculum in higher education.

In closing, this research project has strengthened my belief that curriculum in higher education is as essential to examine and understand as the pedagogical approaches used in supporting student learning. Yet, curriculum is often overlooked, being taken for granted by those who work most closely with it in their professional roles – faculty.

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Appendix 1: FASS-LUMS REC Ethics Approval

Educational Research | Lancaster University

6th February 2023

Dear James

Thank you for submitting your ethics application and additional information for Faculty Conceptualizations of "Curriculum" in Canadian Polytechnics: A Phenomenographic Study. The information you provided has been reviewed and I can confirm that approval has been granted for this project.

As Principal Investigator your responsibilities include:

- ensuring that (where applicable) all the necessary legal and regulatory requirements in order to conduct the research are met, and the necessary licenses and approvals have been obtained;
- reporting any ethics-related issues that occur during the course of the research or arising from the research (e.g. unforeseen ethical issues, complaints about the conduct of the research, adverse reactions such as extreme distress) to the Research Ethics Officer (Dr Richard Budd or Dr Jonathan Vincent).
- submitting details of proposed substantive amendments to the protocol to Prof Paul Ashwin for approval.

Please do not hesitate to contact your supervisor if you require further information about this.

Yours sincerely

Kathryn Doherty
Programme Co-ordinator
PhD in Higher Education: Research, Evaluation and Enhancement

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Appendix 2: Verbal Consent Protocol

Thank you for meeting with me today. I have approached you because of your experience as an instructor at a polytechnic and because of the unique insight that you can provide to this study;

1. Have you had the chance to read the Participant Information Sheet that I shared with you in my initial email?
   - **YES** → Ask if everything is clear and if they have any questions. Answer any questions about the study.
     Then ask:

     1a) Do you have any comments or special wishes regarding preserving the anonymity of yourself/your organization?

       - **YES** → Discuss the participant's wishes and make a note of them, commit to respect them if feasible. In the unlikely event that the participant would request something that you may not be able to do (like use their real name, or agree to talk but not agree to be quoted) this participant would be ineligible for participation in the study and the interaction would have to end.
       - **NO** → proceed to question 1b

     1b) Do you have any questions regarding your voluntary participation and right to withdraw from this study?

       - **YES** → Answer the participant's questions, reviewing the 4-week time to withdraw and explain how all information will be anonymized by this time, and it will not be possible to remove the anonymized data.
       - **NO** → proceed to question 2

   - **NO** → review and discuss the Participant Information Sheet there and then. In case of special wishes or voluntary participation and right to withdraw, proceed as above.

2. Do you agree to participate in the study on the terms discussed in the Participant Information Sheet?
   - **YES** → Thank you, make note of consent, and proceed to questions.
   - **NO** → Thank you, gather feedback if any, and end interaction.

Appendix 3: Invitation to Participate in Research Study Email

Dear {first name of recipient},

My name is James Beres, I am an educational developer at the Southern Alberta Institute of Technology (SAIT) and a PhD student at Lancaster University. I would like to invite you to take part in a research study that I am conducting that examines how polytechnic instructors think about the curriculum of the programs they teach.

I have approached you because of the unique view you may bring to the study based on the type of program you instruct in and the number of years of teaching experience that you have.

I would be very grateful if you would agree to participate in this study.

Please review the attached Participant Information Sheet for more details regarding the study and what it entails.

If, after reviewing the Participant Information Sheet, you decide that you would like to participate in the study, please reply to this email.

If you have any questions or concerns relating to this study, please contact me at j.beres@lancaster.ac.uk.

Kindest Regards,

James Beres

Appendix 4: Participant Information Sheet

Participant information sheet

Research Study Title: Faculty Conceptualizations of 'Curriculum' in Canadian Polytechnics

I am an educational developer at the Southern Alberta Institute of Technology (SAIT) and a PhD student at Lancaster University, and I would like to invite you to take part in a research study about how instructors think about the curriculum of the programs they teach.

Please take time to read the following information carefully before you decide whether or not you wish to take part.

What is the study about?
My study aims to examine how instructors at polytechnics in Alberta think about how their programs are put together. Additionally, the study will look at how the experiences of instructors impact their thinking.

Why have I been invited?
I have approached you because of the unique view you may bring to the study based on the type of program you instruct in and the number of years of teaching experience that you have.

I would be very grateful if you would agree to take part in this study.

What will I be asked to do if I take part?
If you decide to take part, your involvement would be to meet with me via MS Teams or Zoom for approximately 45 to 60 minutes to take part in a recorded interview. The purpose of the interview will be for me to gain insights into your thoughts regarding curriculum. The interview schedule will be based on your availability, and the software platform used will be based on your preferences.

What are the possible benefits from taking part?
If you take part in this study, your insights will contribute to our understanding of the unique nature of how instructors at polytechnics think about curriculum. Additionally, participating in the interview will provide you with an opportunity to reflect critically on your curriculum and may uncover insights that help you in your professional practice.

Do I have to take part?
No. It's completely up to you to decide whether or not you take part. Your participation is voluntary. Your choice to participate or not will be kept confidential between the two of us.

What if I change my mind?
If you change your mind, you are free to withdraw at any time during your participation in this study. If you want to withdraw, please let me know, and I will extract any data (ideas or information) you contributed to the study and delete them. However, it is difficult and often impossible to take out data from one specific participant when this has already been anonymized or pooled together with other people's data. Therefore, you can only withdraw up to 4 weeks after you are interviewed as part of the study.

What are the possible disadvantages and risks of taking part?
It is unlikely that there will be any major disadvantages or risks in your choice to take part. All that is required of you is to take part in an interview with me that will last between 45 to 60 minutes. However, if you are likely to find this topic distressing, it is advised that you do not take part.

Will my data be identifiable?
After the interview, only I, the researcher conducting this study will have access to the ideas you share with me.

I will keep all personal information about you (e.g. your name and other information about you that can identify you) confidential; that is, I will not share it with others. The interviews will be video and audio recorded and then transcribed, but the video will not be kept or analyzed. Only the anonymized written transcript will be analyzed. I will remove any personal information from the written record of your contribution. All reasonable steps will be taken to protect the anonymity of the participants involved in this project.

How will I use the information you have shared with me and what will happen to the results of the research study?
I will use the information you have shared with me for research purposes only. This will include my PhD thesis and other publications, such as academic journals. I may also present the results of my study at academic conferences.

When writing up the findings from this study, I would like to reproduce some of the views and ideas you shared with me. I will only use anonymised quotes (e.g. from my interview with you), so that although I will use your exact words, all reasonable steps will be taken to protect your anonymity in our publications.

How my data will be stored
Your data will be stored in encrypted files (that is no-one other than me, the researcher will be able to access them) and on password-protected computers. I will keep data that can identify you separately from non-personal information (e.g. your views on a specific topic).In accordance with University guidelines, I will keep the data securely for a minimum of ten years.

What if I have a question or concern?
If you have any queries or if you are unhappy with anything that happens concerning your participation in the study, please contact myself at j.beres@lancaster.ac.uk or my PhD supervisor, Professor Paul Ashwin at paul.ashwin@lancaster.ac.uk.

If you have any concerns or complaints that you wish to discuss with a person who is not directly involved in the research, you can also contact: Professor Paul Trowler, Programme Director PhD Higher Education: Research, Evaluation and Enhancement at **p.trowler@lancaster.ac.uk**

This study has been reviewed and approved by the Faculty of Arts and Social Sciences and Lancaster Management School's Research Ethics Committee.

Thank you for considering your participation in this project.

Appendix 5: Interview Guide

Faculty Conceptualizations of Curriculum in Canadian Polytechnics

Interview Guide – James Beres

Research Question	Related Potential Interview Questions
RQ 1 - How do faculty teaching in Canadian polytechnic institutions conceptualize curriculum?	• Tell me about the program(s) you teach in? • Tell me about the courses you teach? • Thinking about one of the courses you are currently teaching or have taught recently, what is taught? • Is all that learners need to know or are taught represented in the [outline/syllabus*]? Tell me more … • We have spent a significant amount of time discussing what is taught within the specific context of your program. I'd like to step back and ask you a question from a broader perspective. Reflecting back on our conversation, in your own words, what is curriculum?
RQ 1.1 - How do faculty conceptualize the relationship between 'curriculum' and their perceived pedagogical decisions and practices?	• How do you know what to teach? • In your opinion, what is the relationship between [*outline/syllabus*] and the learner? • Tell me about how you choose the learning materials for the course. • Can you tell me about the relationship between what you teach and how you teach it?
RQ 1.2 - How do faculty conceptualize the role of curriculum as perceived by learners?	• Thinking from the perspective of the learners in your classroom, what is the role of [*curriculum*] in their learning?
RQ 1.3 - How do faculty conceptualize the relationship between curriculum and industry needs?	• How is it decided what is taught? • Can you tell me of a time when there were changes made to what is taught in the course? What caused the change?
RQ 2- What relationships exist between faculty members' understandings of 'curriculum' and their academic credentials, the contexts in which they teach, or the number of years that they have taught?	• Can you tell me about your background?
RQ 3 - How do differing faculty conceptions of curriculum impact communications with other colleagues when discussing curriculum?	• Have you been involved in deciding what is taught? Can you tell me more about your experiences? • In what situations do you find yourself discussing what is taught in your courses with others? • Tell me more about your discussions with …

Research Consent

☐ Complete *Verbal Consent Protocol*

Participant Background

☐ Can you tell me about your background?

   ☐ Professional

   ☐ Educational

   ☐ Credentials

   ☐ Where did you study?

   ☐ Years in industry before teaching

   ☐ Years of teaching experience

Program – Course Background

☐ Can you tell me about the program or programs you teach in?

   ☐ Program type

☐ Can you tell me about the courses you teach?

   ☐ Connection to program

   ☐ Connection to other courses

This will likely directly lead to the curriculum questions as second questions. "You mentioned … Tell me more about …."

Curriculum Questions

These are potential probing or direct questions to be used if the introductory question does not lead deep enough.

*Mirror the language used by the participant.

Faculty-Related Questions

☐ Thinking about one of the courses you are currently teaching or have taught recently, what is taught?

☐ How do you know what to teach?

   ☐ Is this captured in a formal document [*outline/syllabus**]?

☐ How is it decided what is taught?

   ☐ Who decides?

☐ Have you been involved in deciding what is taught? Can you tell me more about your experiences?

☐ Can you tell me of a time when there were changes made to what is taught in the course? What caused the change?

☐ Tell me about how you choose the learning materials (i.e., readings, online resources, etc.) for the course?

☐ Can you tell me about the relationship between what you teach and how you teach it?

Student-Related Questions

☐ In your opinion, what is the relationship between [*outline/syllabus**] and the learner?

☐ Thinking from the perspective of the learners in your classroom, what is the role of [*curriculum**] in their learning?

☐ Is all that learners need to know or are taught represented in the [*outline/syllabus**]? Tell me more …

Communication Questions

☐ In what situations do you find yourself discussing what is taught in your courses with others?

☐ Tell me more about your discussions with …

☐ another instructor(s)?

☐ your academic leadership?

☐ other institutional staff?

Final Question

☐ We have spent a significant amount of time discussing what is taught within the specific context of your program. I'd like to step back and ask you a question from a broader perspective. Reflecting back on our conversation, in your own words, what is curriculum?