CONCEPTIONS OF CURRICULUM IN CO-OPERATIVE EDUCATION: A FRAMEWORK FOR ANALYSIS OF THE CO-OP PREPARATORY CURRICULUM

by

Nancy Davidge-Johnston
Bachelor of Science, University of Waterloo, 1982
Master of Science in Education, Simon Fraser University, 1996

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

In the Faculty of Education

©Nancy Davidge-Johnston 2007

SIMON FRASER UNIVERSITY

Spring 2007

All rights reserved. This work may not be reproduced in whole or in part, by photocopy or other means, without permission of the author.
APPROVAL

Name: Nancy Lee Davidge-Johnston

Degree: Doctor of Philosophy

Title of Research Project: Conceptions of Curriculum in Co-operative Education: A Framework for Analysis of the Co-op Preparatory Curriculum

Examiner Committee:

Chair: Dr. Linnie Kanevsky

Dr. Allan MacKinnon
Senior Supervisor

Dr. Charles Bingham, Assistant Professor
Member

Dr. Sean Blenkinsop, Assistant Professor
Examiner

Dr. Patricia L. Linn, Center for Programs in Psychology, Antioch University
External Examiner

Date: February 26, 2007
DECLARATION OF
PARTIAL COPYRIGHT LICENCE

The author, whose copyright is declared on the title page of this work, has granted to Simon Fraser University the right to lend this thesis, project or extended essay to users of the Simon Fraser University Library, and to make partial or single copies only for such users or in response to a request from the library of any other university, or other educational institution, on its own behalf or for one of its users.

The author has further granted permission to Simon Fraser University to keep or make a digital copy for use in its circulating collection (currently available to the public at the "Institutional Repository" link of the SFU Library website <www.lib.sfu.ca> at: <http://ir.lib.sfu.ca/handle/1892/112>) and, without changing the content, to translate the thesis/project or extended essays, if technically possible, to any medium or format for the purpose of preservation of the digital work.

The author has further agreed that permission for multiple copying of this work for scholarly purposes may be granted by either the author or the Dean of Graduate Studies.

It is understood that copying or publication of this work for financial gain shall not be allowed without the author’s written permission.

Permission for public performance, or limited permission for private scholarly use, of any multimedia materials forming part of this work, may have been granted by the author. This information may be found on the separately catalogued multimedia material and in the signed Partial Copyright Licence.

The original Partial Copyright Licence attesting to these terms, and signed by this author, may be found in the original bound copy of this work, retained in the Simon Fraser University Archive.

Simon Fraser University Library
Burnaby, BC, Canada

Revised: Spring 2007
The model of co-operative education has been part of higher education for one hundred years with relatively little attention paid to its curriculum. Given the significant changes in the co-op “landscape” over this same time, a thorough review of the co-op curriculum is in order to ensure its relevance to a contemporary model of post-secondary education. This analysis explores the literature regarding learning and curriculum to better assess and develop the co-op curriculum. Several theoretical perspectives regarding curriculum and learning serve as a foundation for the development of a co-op analytic framework. The various assessment components of the analytic framework are brought together using an approach of “informed eclecticism”, resulting in the development of a multi-phase, multi-focal framework for assessing co-op curricula and the events of practice. This framework is then applied to the “Phantom Co-op Preparatory Curriculum” specifically designed for testing this framework.

This thesis gives rise to a comprehensive definition of the co-op curriculum encompassing three distinct categories: co-op academic curriculum, co-op preparatory curriculum, and co-op workplace curriculum. Analysis of the literature surrounding the development of co-op programs provides an historical overview of the co-operative education “landscape” highlighting some of the important
contextual factors that influence conceptions of co-op and its curriculum. The upshot of the thesis is a critical analytic framework that may be used to explore co-op curriculum in ways that extend traditional justifications and assessments of co-op programs and curricula well beyond what is typically conceived in a curricular review.

This thesis presents an opportunity for co-op educators to re-examine co-op goals, practices, values and beliefs by considering how new understandings regarding teaching, learning, curriculum, and the changing co-op environment all impact on the contemporary co-op curriculum.
DEDICATION

To Joel and Carling for supporting this indulgence over many evenings, weekends, holidays and other family times and to my parents, June and Bill, for hanging in there until it was done!
ACKNOWLEDGEMENTS

I would like to acknowledge and thank a number of people who have contributed to this thesis in various ways. They are:

- Allan MacKinnon, my supervisor, for his support and direction, allowing me to sort through the “messy” problems I encountered with just the right amount of guidance.
- Co-operative Education staff at SFU who have actively engaged in discussions and activities regarding many of the ideas resulting from this work.
- Nello Angerilli, Associate Vice-President Students and International at SFU, for his interest in my work and his support of my leave to complete it.
- Colleagues in the Association for Co-operative Education BC, the Canadian Association for Co-operative Education, the Co-operative Education and Internship Association and the World Association for Co-operative Education, and especially members of the Legacy Group with whom I had many discussions regarding aspects of this thesis, and the history and future of co-operative education.
# TABLE OF CONTENTS

| Approval | ............................................................... ii |
| Abstract | ............................................................... iii |
| Dedication | .............................................................. v |
| Acknowledgements | ........................................................... vi |
| Table of contents | ........................................................... vii |
| List of Figures | ............................................................ x |
| List of Tables | ............................................................. xi |

Chapter One: Introduction, Purpose, Overview, and Thesis Structure .............. 1
  Overview: Co-operative Education And Curriculum ..................................... 5
  Thesis Structure ......................................................................................... 9
  Chapter Two: Methods ................................................................................ 9
  Chapter Three: History of Co-op and Overview of the Co-op Landscape ....... 10
  Chapter Four: Philosophical ad Theoretical Underpinnings of Co-op Learning ................................................................. 10
  Chapter Five: Conceptions of Co-op and Curriculum ................................ 11
  Chapter Six: Curricular Frameworks and Co-op ........................................ 11
  Chapter Seven: Proposed Co-op Framework and Analysis of Selected Curricular Elements ................................................................................. 12
  Chapter Eight: Conclusions, Limitations, and Implications for Research and Practice ................................................................. 12

Chapter Two: Methods ................................................................................ 14
  The Challenge of Traditional Curriculum Assessment Tools and Co-op ........ 15
  A Methodology for Curriculum Inquiry ....................................................... 21
  Chapter Summary ....................................................................................... 26

Chapter 3: A Century of Co-operative Education ....................................... 29
  Brief Overview and History of Co-operative Education ............................. 29
  Origins of Co-op ....................................................................................... 30
  Curricula Compared ................................................................................ 33
  Changes Affecting the Co-op Landscape ..................................................... 45
    From the Industrial Age to the Information Age ...................................... 46
    The Unexpected Growth of the Model ...................................................... 52
  Changes in the Co-op Format .................................................................. 55
  The Changing Role of the Employer and Needs of the Students ............... 56
  Globalization ............................................................................................ 71
  Enhanced Understanding of Teaching and Learning .................................. 72
  Chapter Summary ....................................................................................... 74
Chapter Four: Philosophical and Theoretical Underpinnings of Experiential Learning and Co-operative Education .......................................................... 77
Western Educational Philosophers and Experiential Learning .......................................................... 77
Conceptions of Learning and Co-op .......................................................................................... 90
   Cognitive Development .......................................................................................... 90
   Social Learning ................................................................................................. 91
   Experiential Learning Model ........................................................................... 92
   Reflective Practice .......................................................................................... 93
   Situated Learning .......................................................................................... 94
   Epistemological Appropriation ...................................................................... 96
   Authentic Learning and Co-op ....................................................................... 97
   Transformative Learning ................................................................................ 98
   Critical Theory and Co-op ........................................................................... 101
Chapter Summary .................................................................................................. 105

Chapter Five: Conceptions of Curriculum and Co-op .................................................. 108
   Defining, Developing and Understanding Curriculum ........................................... 108
   How the co-op curriculum differs from traditional academic curricula ........ 120

Chapter Six: Curricular frameworks and Co-op ..................................................... 144
   Eisner and Vallance’s curricular orientations .................................................. 145
   The explicit, implicit, and null curricula ......................................................... 154
   Miller and Seller’s metaorientations ............................................................. 155
   The Berlak Dilemmas ................................................................................... 159
   Cultures of Curriculum ................................................................................ 163
Chapter Summary .................................................................................................. 169

Chapter Seven: Proposed Framework and Analysis of the Co-op Preparatory Curriculum .......................................................... 172
   The Framework for Analysis of Co-op Curriculum ........................................... 172
   The Phantom Curriculum and Selected Element for Analysis ......................... 181
   Analysis of the Phantom Curriculum and Résumé Module Using the Co-op Analytic Framework .......................................................... 186

Chapter Eight: Review, Limitations, and Implications ............................................. 230
   Review ........................................................................................................... 230
   Limitations of this Study .............................................................................. 233
   Implications for Research ............................................................................ 234
      Extending this Research ........................................................................ 234
      Extending Others’ Research .................................................................. 236
   Implications for Practice ............................................................................. 238
      Re-conceptualizing Co-op and Its Curriculum ........................................ 238
      Considering a Critical Pedagogy and Co-op’s Transformational Potential 239
      Extending Curricular Tools and Practices ............................................... 242
Chapter Summary .................................................................................................. 243
Appendices ................................................................. 245
Appendix 1: Syllabi from Selected North American Universities .......... 246
Appendix 2: Phase 2 Analysis: Exploration of Culture Questions ............ 264
Appendix 3: Phase 3 Analysis: Curricular Purpose, Content, and Approach Questions ....................................................................... 266
Reference List .............................................................................. 268
LIST OF FIGURES

Figure 1: Co-op Analytical Framework ..............................................................174
Figure 2: Phase 1: Identification of Co-op Curriculum .................................175
Figure 3: Phase 2: Examination of Culture and Identification of Purpose(s) ..176
Figure 4: Phase 3: Analysis of Curricular Elements ........................................180
Figure 5: Phase 4: Identification of Issues and Recommendations...............181
LIST OF TABLES

Table 1: Original Syllabus of Herman Schneider, 1906 (Park, 1916) ..................34
Table 2: Changing Stakeholder Expectations ..................................................69
Table 3: Curricular Orientations and Teaching/Learning Implications ..........158
Table 4: Curricular Orientations and the Berlak Dilemmas .........................159
Table 5: A Framework for Understanding a Culture of Curriculum
(Joseph at al., 2000, p.23) ..............................................................................168
CHAPTER ONE: INTRODUCTION, PURPOSE, OVERVIEW, AND THESIS STRUCTURE

Co-operative education (co-op) programs in higher education integrate classroom study with workplace learning by providing opportunities for students to alternate periods of paid work and periods of academic study as they complete their degree. During their academic careers co-op students spend an additional 30-50% of their study time working for employers in fields related to their course of study. At the completion of their program, co-op students typically graduate with their degrees and one and a half to two years of career related work experience. This model of education was first introduced to the post-secondary system in the United States in 1906, and some fifty years later in Canada. Early co-op research focused primarily on employability and the economic impacts of co-op. Co-op is however an educational program and must necessarily “demonstrate that (it) is an educational model and not simply concerned with employment” (Cates and Jones, 1999, p.6). More recently co-op researchers have begun to examine the nature of learning in co-operative education in an attempt to better understand what and how co-op students learn before, during and after their work terms. As these understandings grow, there is an opportunity to better develop and support co-op learning opportunities through more thoughtfully designed and delivered co-op curricula.
The purpose of this thesis is to analyze and assess the literature and discourse about learning and co-op in order to better define, understand, and re-consider “curriculum” in co-operative education. To assist with this exploration I review the origins and purposes of co-operative education to more clearly define the expected educational outcomes that should guide the program curriculum. Major changes in the co-op landscape are also considered within the broader context of Western educational theories and philosophies and each is analyzed with respect to its potential impact on co-op pedagogy. As a result of the analysis of the co-op literature, three distinct co-op curricula are defined, with the focus of this analysis placed on the institutionally controlled and delivered co-op preparatory curriculum.

The “upshot” of this thesis is the development of a systematic framework for the analysis of the preparatory curriculum in co-operative education. As no single theory can explain all aspects of any given event of practice (Roberts, 1980), this framework takes a multi-focal perspective to provide as complete a view as possible. The Co-op Analytic Framework developed in this thesis is informed by several other curriculum inquiry models that were designed for the analysis of traditional, classroom-based educational curricula. In particular, perspectives are drawn from the works of Eisner and Valance (1974), Berlak and Berlak (1981), Miller and Sellers (1990), Beyer and Apple (1998), Kincheloe (1999), and Joseph, Bravmann, Windschitl, Mikel, and Green (2000). Given new understandings regarding adult learning and the very dynamic educational,
economic, and political environments in which co-operative education programs are situated, such a framework for co-op curriculum inquiry is needed to ensure that co-op programs remain pedagogically relevant. The multi-focal approach I have taken ensures a more robust, more complete picture of a given co-op curricular element or event – a theoretical kaleidoscope through which to better examine, understand, critique, and improve the co-op curriculum and experience.

At the core of this thesis is a curriculum inquiry providing a critical analysis of a typical co-op preparatory curriculum using the proposed co-op framework for analysis. This necessitated a clearer definition of “the co-op curriculum”, something that has not been articulated in the co-op research to date. The literature I reviewed revealed three categories of co-op curricula. Some researchers (e.g. Heinemann et al, 1992) have described the co-op curriculum in terms of courses and workshops taught prior to students going out on work terms. Others such as Munby, Chin, and Hutchinson (2003) have focused upon events in the workplace and the emergent co-op curriculum they present to students. Others still have studied the relationship between the academic curriculum required of co-op students in a given discipline and their workplace learning and performance (Cedercreutz & Cates, 2003; Contomanolis, 2003). While all of these studies refer to “the co-op curriculum”, they are referring to very different aspects of learning. There is currently no single shared definition of co-op curriculum that has been used throughout the co-op research. I
propose that three distinct, but interdependent, categories of curricula support most contemporary co-op programs: the co-op academic curriculum, the co-op workplace curriculum and the co-op preparatory curriculum (each of these is detailed in Chapter Five). The focus of this inquiry is on the co-op preparatory curriculum that is delivered to students in preparation for, and in support of, their work terms. Based upon a review of several sample co-op preparatory curricula from major North American co-op programs, a composite co-op preparatory curriculum (which I have entitled the Phantom Curriculum) is developed and used for the analysis.

This inquiry suggests that an updated conceptualization of co-operative education is necessary. Co-op's original goals and methods need to be reviewed to incorporate new understandings regarding learning and curriculum, to acknowledge the expansion of the original co-op model across the disciplines and internationally, and to reflect the changing economic, social and educational context within which the contemporary model of co-operative education operates. As this one hundred year-old model enters its second century, it may also be time to re-consider the co-op curriculum to ensure it explicitly supports the purposes and aims of contemporary co-op programs and fully integrates new knowledge and understandings regarding learning and curriculum design and development. This inquiry provides both a tool and starting point for such an examination. It encourages co-op curriculum developers to analyze not only the "what" and "how" of the curriculum but also to question "why?" It promotes a
much deeper understanding of curriculum than is offered through more traditional analytic methods and provokes important questions that have been left largely unasked regarding the co-op curriculum.

Overview: Co-operative Education and Curriculum

The model of co-operative education was first introduced at the post-secondary level in 1906 at the University of Cincinnati and later in Canada at the University of Waterloo in 1957. Co-op programs have proliferated from those two pioneering institutions to nearly 1,000 post-secondary institutions and over 300,000 students participating across North America. Globally, more than forty countries are members of the World Association for Co-operative Education (WACE) and participate in work integrated learning programs at the post-secondary level. Increasingly co-op is being seen by key stakeholders (students, institutions and employers) as a desired learning model to complement traditional academic studies -- one that extends classroom learning into the workplace and vice versa, ultimately facilitating student transitions from school to the world of work.

As an integral part of an academic course of study (participation in co-op is mandatory in many academic programs), co-op students follow the academic curriculum outlined for their course of study as well as a separate “co-op” curriculum intended to prepare and support them for, during, and after their work terms. While varying somewhat from school to school, co-op curricula across
North America tend to cover very similar subject matter. This content has evolved over the years, largely in response to the changing needs of employers, and has been delivered, for the most part, using traditional teaching methods such as lectures and workshops.

Very little attention has been focused on the co-op preparatory curriculum in the educational literature. Co-op programs have implicitly relied upon the work experience itself to evoke the majority of the learning that takes place in co-op. This curriculum could be thought of as being emergent, largely directed by the employers' needs and activities. Students report that their "real" co-op learning takes place "on the job" during the work term through these emergent interactions with peers, supervisors and work related problems (Johnston, Angerilli, & Gajdamaschko, 2003). Many co-op programs rely almost entirely on the "job tasks performed by students as providing the basis for learning in the workplace" (Heinemann, DeFalco, & Smelkinson, 1992). However, learning in the workplace has been theorized to differ significantly from learning in school on several important dimensions: purpose of the learning, organization of the subject matter, role of knowledge and skills, nature of assessment, and ways of learning (Chin, Munby, & Hutchinson, 2000). These differences are not typically made explicit to the learners and in many cases students have difficulty recognizing and therefore optimizing the learning opportunities that are embedded in the various work problems and tasks.
Even though the majority of the learning is seen to occur during the work placement, and workplace learning has been shown to differ significantly from classroom-based learning, the co-op preparatory courses have remained largely focused on employment readiness versus workplace learning readiness. Perhaps it is not surprising that understanding how learning occurs during co-op placements, at least in the post-secondary co-op milieu, has not been a focus of significant research or professional discourse. Heinemann (1983) proposed a pedagogical model designed to help direct students' learning during the work experience. He envisioned a curriculum in which concepts and theories from a particular university or college class would be applied or interpreted in the "laboratory" of the workplace. This early attempt to connect theory and practice through shared learning, while progressive, was later deemed limited by its connection back to a single class. Heinemann himself acknowledged that the "world of work requires examining experiences from a multi-faceted, interdisciplinary perspective" (Heineman, Defalco, & Smelkinson, 1992), and sought a broader approach to understanding and supporting co-op workplace learning. Citing Dewey's instrumentalism (Dewey, 1901) as a philosophical foundation, Heinemann et al. (1992) proposed an interdisciplinary curricular model that integrated school-based theory and work-based application from various discipline perspectives: sociological, anthropological, career developmental, and psychological. They also sought a greater focus on the development of a more self-directed learner. While the important notions of self-direction and transfer were introduced to the discourse regarding the co-op
preparatory curriculum through this work, little effect on co-op curriculum has resulted.

The co-op preparatory curriculum continues to predominantly serve the very utilitarian purpose of ensuring that students obtain the tools necessary to get a job (resume, cover letter, interview, and general workplace preparation). Much less attention has been paid to helping students learn how to learn on the job. Given the significant differences identified between learning in school and in the workplace, and the general lack of preparation for the learners moving between these two contexts, it is not surprising that a student's workplace performance is often incongruent with his or her classroom performance. In many cases, co-op work term learning has been identified as variable or 'hit and miss', dependent upon a given student's ability to recognize and negotiate the new learning environment. Co-op workplaces may indeed provide many rich and varied opportunities for student learning, however these opportunities are embedded within tasks and routines designed to serve the authentic needs of the workplace (Munby, Chin, & Hutchinson, 2000). In the absence of any curricular intervention designed to help students learn in these new and diverse environments, many of these learning opportunities will remain unrecognized and therefore not fully realized.

I believe the co-op preparatory curriculum presents a powerful opportunity for supporting co-op workplace learning. It should be designed to support the major
learning outcomes of the co-op experience and encourage students to recognize, access, and value the various learning opportunities they will encounter. This curriculum needs to be regularly examined and revised in light of a growing theoretical and empirical literature on adult learning. Unless such formal reviews are conducted on a regular basis, the co-op preparatory curriculum is vulnerable to becoming disconnected from the school and work experiences of students. It is also at risk of being dated, uninformed by new understandings and circumstances, and misaligned with contemporary program goals and assessments methods. In the absence of regular reviews and revisions, co-op program curricular changes have the potential to be directed by employer needs and desires, potentially jeopardizing the focus on student learning.

Thesis Structure

Chapter Two: Methods

In this chapter, a brief description of curriculum inquiry is presented within which I describe the two major components of this thesis: 1. the development of a unique conceptual framework for co-op curriculum analysis and, 2. the analysis of a curricular element selected from the "Phantom" co-op preparatory curriculum using the proposed framework. I describe the need to clearly define what is meant by "curriculum" in co-operative education to re-conceptualize co-op learning in light of several changes in the co-op milieu.
Chapter Three: History of Co-op and Overview of the Co-op Landscape

This chapter reviews the origins and goals of co-operative education from its inception through to today. A brief overview of major changes in the co-operative education landscape is also presented with particular emphasis on exploring whether, and in what ways these changes might be incorporated into a more contemporary conception of the co-op model and its curricula. The original 1906 Co-operative Plan curriculum is presented along with a 2006 sample co-op curriculum for comparative purposes.

Chapter Four: Philosophical ad Theoretical Underpinnings of Co-op Learning

Perspectives from Western educational philosophers and theorists are reviewed and discussed with respect to positioning co-op within the larger context of experiential learning. Underlying assumptions and beliefs about co-op that impact on curriculum direction and development are identified and discussed. The chapter concludes with an overview of contemporary learning theories and models that may inform and challenge current assumptions underpinning the contemporary co-op curriculum. Critical perspectives raise some disturbing questions regarding the potential for co-operative education to be seen and used as a strategy for the production of workers at the service of an employer-driven agenda.
Chapter Five: Conceptions of Co-op and Curriculum

This chapter provides a brief historical overview of the curriculum field and distinguishes between the interests of researchers seeking to know more about the curriculum development process and those seeking to better understand the nature of curriculum. This inquiry will do some of each: seek to better align stated co-op purposes and objectives with co-op curricular content, format and assessment as well as theorize about gaps in understanding regarding the culture of co-op curriculum, its underlying beliefs and values, and the null and hidden curricula that may also be at play. Three distinct co-op curricula are proposed, related but differing in significant ways such as who determines what knowledge is of value, who delivers and assesses the content, and who benefits from the curricular outcomes. Discussion turns to the differences between the co-op workplace curriculum and classroom-based curricula. Several important factors distinguish the two which need to be considered in the design and delivery of the co-op preparatory curriculum if it is to play the important role of helping students recognize and exploit the workplace learning opportunities they will encounter on their co-op terms.

Chapter Six: Curricular Frameworks and Co-op

In this chapter, five contemporary curricular frameworks are reviewed and discussed with respect to how they might inform an analysis of co-op curricula:

- Dilemmas of curriculum: Berlak and Berlak (1981)
- Orientations of curriculum: Miller and Seller (1990)
Informed by these frameworks, an approach to reviewing the co-op curriculum is proposed that addresses the unique needs of the diverse learners and learning environments that characterize co-operative education. The proposed framework, detailed in chapter seven, also addresses the notion of critical pedagogy as well as the transformational potential of co-op learning.

Chapter Seven: Proposed Co-op Framework and Analysis of Selected Curricular Elements

A multi-focal analytical framework for co-op curriculum is presented in this chapter. Selected preparatory co-op curricula are reviewed and distilled into a "phantom" preparatory curriculum from which the résumé module is selected for review using the proposed analytic framework. This analysis is situated within current discourse regarding co-op programs' purpose(s), goals and curricular directions and includes conceptualizations of a more contemporary co-op curriculum.

Chapter Eight: Conclusions, Limitations, and Implications for Research and Practice

This chapter reviews the key points from the two major areas of analysis in this thesis:

- the analytic framework for examining contemporary co-op curriculum; and
- the critical analysis of a Phantom Co-op Preparatory Curriculum.
Reflections on both reveal implications for both research and practice, including conceptions of a praxis-oriented curricular outline for the co-op preparatory curriculum.
CHAPTER TWO:
METHODS

The field of curriculum inquiry is diverse in its methods. Historical focus has been on establishing aims, clarifying central concepts, determining appropriate methods and organization, and establishing the social, psychological, and logistical factors that might affect curricular success. Researchers have also described the significant constraints and demands on curricular implementation and evaluation procedures. While there is some consensus regarding important curricular issues and areas of inquiry, there is little agreement as to how to go about it (Barrow, 1985). Several analytic frameworks and models have been developed to help in the review and development of curricula. Some of these analytic frameworks focus on a linear sequence of inquiry that begins with establishing educational ends or outcomes, and then prescribes the content and form thought to best achieve those ends. Other frameworks specifically seek to expose the underlying assumptions and beliefs held by curriculum designers. Still others are grounded in various learning theories or philosophical and political positions. Many are useful in helping better analyze aspects of the co-op curriculum but no single framework fully addresses the varied and complex features of that curriculum.
In this analysis I draw from several frameworks and learning models to examine the unique events of co-op practice. This approach of *informed eclecticism* (Roberts, 1980), detailed later in this chapter, allows for a multi-faceted interpretation, one that enables the reviewer to consider multiple perspectives in order to help gain a more complete picture of the curricular event or element under analysis. Just as teachers must inevitably modify curricular materials to suit the particularities of their students and their unique circumstances, informed eclecticism allows curriculum analysts to consider elements from more than one theoretical framework as they attempt to understand the particularities of that curricular element or event.

This chapter begins with a brief discussion regarding traditional curriculum assessment approaches and their limitations. This is followed by a description of how conceptual analysis will be used in the evaluation of curricular materials in this inquiry as well as elaboration upon the use of *informed eclecticism* as a way of interpreting and understanding the complexities of the co-op curriculum and related events of practice.

**The Challenge of Traditional Curriculum Assessment Tools and Co-op**

Historically curriculum evaluation has been of two major types: 1. assessment based on the observed effects from using the materials as compared to their intended outcomes and 2. assessment of the inherent features of a curriculum
(content, format, delivery methods, etc.) with respect to instructional outcomes (Mahung, 1980, p.100). These inquiry approaches have been designed for classroom-based learning with little or no connection made to those environments where the learning may later be applied. They also assume that the desired learning outcomes will occur as a result of the learner engaging with the curricular materials; and that achievement (or non-achievement) of the outcomes will be apparent during the period the learner is engaged with the course (e.g. by the final exam). Neither of the two traditional approaches to inquiry enables analysts to uncover the implicit features of a curriculum that may result in the unexpected outcomes or delayed learning so commonly reported in co-op. Neither approach is designed to take into account the multiple learning environments in which the co-op curriculum is delivered and evaluated. Co-op curriculum crosses disciplinary and cultural boundaries as it supports students from diverse academic faculties as they move between school and work, and from one employment setting to another. Co-op presents multiple opportunities for skills and knowledge transfer, affords multiple teachers (including professors, co-op staff, peers, and employers), and prepares the learner in one environment for learning in another. It requires learners to assume different roles as they recognize and adapt to each new learning environment.

The co-op preparatory curriculum is designed to prepare students for their work placements by providing information and tools relevant to the work search and on-the-job performance. It is only once students are immersed in the work
search and placement process that the effectiveness of this curriculum can truly be assessed. However, students' work term performances are assessed by their employers (not the original 'teacher' of the skills), and are measured differently for each student in each workplace. Using the traditional assessment approaches noted above to review the co-op curriculum does not do justice to it as it reduces a fairly complex process to the matching of observed learning outcomes with initial learning expectations.

While attractive for their apparent simplicity and logic these traditional approaches fall short in the co-op context on several counts. They fail to acknowledge the gaps that may occur due to significant differences between the learning (school) and application (work) environments. They do not consider the impact of having the evaluations conducted by a variety of assessors, variously trained and operating within very different frames of reference. They assume that workplace performance is correlated with the preparatory curriculum and that employer evaluators are familiar with that curriculum. They also assume that students will readily transfer their learning from the preparatory curriculum to a new environment. Most of these assumptions are unfounded and are subject to significant external influence. There is a lot less control over much of the co-op learning and assessment than would be possible in a strictly classroom-based setting. Using curriculum analysis methods largely based on the congruency between stated outcomes and observed outcomes, as Kliebard (1970, p.270) notes, "ignores what may be the more significant latent outcomes
in favor of the manifest and anticipated ones, and minimizes the vital relationship between ends and means."

Fundamental to the problem of assessing curriculum on the basis of instructional outcomes is the notion that the curriculum developer, teacher, and assessor are one and the same or at the very least have a shared curricular vision. Even in a traditional classroom context this is a very big assumption given the wide variety of factors that affect teaching arrangements (e.g. shared and split classes, personnel changes, substitutes, etc.) and the diverse ways in which curriculum is developed at the school level. In the co-op context where the teaching and learning occur in two very different places (the university and the workplace) and where multiple teachers (peers, supervisors, co-ordinators, and professors) are involved with what is often an emerging curriculum, using such evaluation methods is clearly inadequate. To essentially equate curriculum with instruction is problematic. Johnson (1967) argued for assessment methods that take into account the individuality of each teaching situation, noting that good learning (i.e. where observed results match stated expectations) can result from bad teaching and the reverse. To a great extent then, the "process of deriving learning activities from specified objectives is mainly arbitrary" (Mahung, 1980, p.102).

Along with the limitations of evaluating curriculum based solely on instructional outcomes is the lack of critical analysis regarding the validity of the curriculum
selection. Even if one were able to control for instructional effectiveness, to assess a curriculum solely based upon the match between educational expectations and outcomes ignores questions regarding the choice of the selected curricular content and materials. Such an approach does not question what content is covered, what is not, why it is covered or not, or even whether the stated outcomes are appropriate within the overall context of the learner's education. There is no opportunity or invitation for critical analysis of the curriculum from the point of view of someone with a different world view or philosophical position than that of the developer.

There have been many and varied curriculum analysis frameworks presented over the past century, each providing a way of better understanding curriculum. Roberts (1980) discusses the use of such frameworks as "lenses" to hold up against a curriculum to see what is illuminated (and what is not). Several frameworks for curricular analysis are presented in Chapter Six of this thesis. They are fairly comprehensive in terms of the features that are evaluated. This comprehensiveness, which allows for wide applicability across curricula, at the same time limits the degree to which any one of the frameworks is able to incisively assess particular curricular materials, especially those of a non-traditional nature. While intended to cross disciplines, these frameworks are nevertheless designed with the events of practice (albeit generally classroom-based practice) in mind. The co-operative education preparatory curriculum, while frequently delivered in the classroom setting, is often taught to classes of
students from a variety of academic disciplines. As previously stated, its outcomes are authentically measured outside of the classroom (e.g. in interview situations, on-the-job), by a variety of evaluators including co-op staff, recruiters and workplace supervisors. Many of the early frameworks described in Chapter Six also fail to detect some of the implicit elements of curriculum such as the hidden or null curricula that influence what and how students learn and which can greatly contribute to learning outcomes, both intentional and unintentional. More recent curriculum theorists suggest a view of curriculum as “text” or “culture” in an attempt to help make explicit some of the social, political, and moral assumptions and beliefs that greatly impact curriculum design and delivery. These more contemporary perspectives regarding curriculum prompt analysts to see and think about powerful elements of curriculum that are not readily apparent or stated, many of which would escape detection using traditional approaches to inquiry. These approaches to curriculum create archetypes that are not meant to describe any single reality but rather to name, define, and reveal curricula as visions and belief systems so as to begin to explore their meaning beyond a series of elements that lead to stated outcomes. While borrowing from several more traditional frameworks, it is to these understanding-oriented approaches to curriculum inquiry that the analytic framework developed for co-operative education owes its greatest debt.
A Methodology for Curriculum Inquiry

This thesis inquiry uses conceptual analysis in the evaluation of selected co-op curricular materials. The approach follows three major steps. The first is to identify a conceptualization of the materials to be reviewed. For this inquiry, a newly created preparatory curriculum (the Co-op Phantom Curriculum) serves as the theoretical composite which provides the material for the framework test and curricular review. This Phantom Curriculum, although hypothetical, is based upon samples of preparatory curricula from major North American co-op programs at the University of Waterloo, Ottawa University, Simon Fraser University, the University of Cincinnati, Kettering University, Drexel University and Northeastern University. The Phantom Curriculum is designed purely to provide the material for the analytic exercise. While it may contain elements that are common to many co-op curricula it is nevertheless a hypothetical composite and as such has, and requires, no empirical veracity.

The notion of curricular commonplaces, first proposed by Schwab (1973) and later expanded upon by Connelly and Clandinin (1988), also helped in conceptualizing the co-op materials to be analyzed in this inquiry. Schwab proposes that four bodies of experience or commonplaces must be considered in all curriculum revisions: subject matter, learners, teachers, and milieus.

The second step in this conceptual analysis requires the development of an analytical framework to conduct the review of the selected materials. This
usually takes the form of "a set of questions or statements pointing to certain logical features based on and abstracted from the theoretical perspective which should be displayed by or included in the materials" (Mahung, 1980, p.106). Through the analytical framework, the theoretical perspective serves to function in the context of evaluation, and is applied directly in the review of the materials in question. In this inquiry multiple theoretical perspectives are considered, and the curricular element under review is analyzed through a multi-focal lens in order to allow for as complete a picture and as many theoretically sustainable interpretations of the materials as possible.

The third step in this conceptual analysis of curriculum is the application of the framework to the curricular materials. The framework serves to guide the reviewer to seek the presence or absence of required and desirable features, determine the extent to which they are, or are not, present and question why. Finally, based upon this analysis, an evaluation is made including judgments on such items as (1) the adequacy of curriculum selection and structure with respect to its consistency with rationale and desired aims, (2) the adequacy of the instructional plan with regard to both form and content and its ability for students to achieve its aims and objectives, (3) the possible unintended outcomes and potential uses other then those intended by the developers, and (4) if necessary, modifications of the material for a specific instructional situation (Mahung, 1980).
A challenge for this inquiry is to effectively define the "co-op curriculum" given that multiple co-op curricula have been referred to in the research. Based upon an inductive analysis of the co-op research literature, I have identified three interdependent but distinct co-op curricula: the academic curriculum, the workplace curriculum and the preparatory curriculum. All curricular elements discussed in this inquiry relate to the latter of the three, the co-op preparatory curriculum.

A second challenge for this inquiry is the analytic framework itself. Schwab (1971) talks about teachers needing to take a multi-focal view of an event so as to capture the varied perspectives offered by co-existing theories for the same phenomenon. Similarly curriculum analysts are limited when following the systematic but necessarily narrower perspectives of any single theoretical approach. With multiple frameworks and models available in the areas of experiential learning and curriculum design, a multi-focal or eclectic approach to curriculum analysis provides the best way of responding to both the complexities of the event or curricular element, and the incompleteness of theories. Each of the many models and frameworks reviewed in this thesis works well for assessing particular aspects of a curriculum and not so well for other aspects. In this sense there is no single best framework or correct model to use in the analysis of any curriculum. Many of the frameworks overlap in some areas, but each also focuses uniquely on particular aspects of the curriculum. The
theoretical frameworks legitimately co-exist in the research literature, serving as different lenses through which to view a common phenomenon.

In order to consider how perspectives from various frameworks might inform the unique events of co-op practice, an approach known as the "art of the eclectic" (Schwab, 1971) allows educators to capture the richness of multiple ways of knowing. The resultant synthesized analysis emerges from a process based on Roberts (1980) notion of informed eclecticism – the ability to see an event of practice or element of curriculum through multiple but equally respectable theoretical lenses. Roberts see this as "a natural consequence of legitimate plurality in theories of learning", allowing for multiple interpretations of a phenomenon depending upon the specific context. If for example a teacher is trying to understand why certain students are struggling with mastering a particular concept, he or she might apply different sets of conceptual principles to produce different theories, each legitimately explaining aspects of the generic phenomena (students struggling) but will actually decide upon the one(s) that best suits the teacher's knowledge of the student, the circumstances, and the issue. By having a variety of theories, the teacher can begin to understand events from different perspectives and decide upon a course of action that is more comprehensive and defensible. Similarly, by examining curricular practice or events from a variety of perspectives, the analyst can maximize the number of interpretations they are able to make and select the most appropriate one(s).
In this way there is an attempt to re-introduce a "wholeness" to the event by capturing the richness of various orientations.

As no one theory can fully explain a given phenomenon, the notion of informed eclecticism provides a very useful way of seeing through multiple lenses in order to get a more complete sense of what may be occurring and why. A clear understanding of each of the lenses (further described in Chapter Six) and the event context (presented in Chapter Three) is required so that one can knowledgeably see the overlaps and differences, and make informed choices regarding which perspectives to consider more fully. For any given analytical event the reviewer must address the incompleteness of co-existing theories by creating a new informed version of the event based upon a synthesis of their knowledge of the circumstances and particular relevant theories. From this the analysis proceeds by combining theory and context to seek new understandings. This approach is used extensively in this inquiry for the analysis of the co-op preparatory curriculum utilizing the proposed new framework for analysis.

While not an ethnography, this thesis draws upon my own experiences as a curriculum developer and observations and conversations with other professionals, students, and employers regarding co-op pedagogy and practice. My experiences are theoretically grounded within the fields of adult learning and curriculum development, and I draw upon philosophical inquiry to identify,
question and critique curricular promises and practices, ultimately providing a framework for critical reflection. Philosophical and conceptual inquiry presents a very powerful way to both better understand what is occurring in a curriculum as well as ascribe value to that activity (Scriven, 1988). This approach extends the traditional curriculum evaluation beyond basic curricular components and towards an understanding of the meaning of curriculum:

"Conceptual analysis enables us to examine the interrelatedness among various elements of curriculum and to envision ultimate aims of education -- the moral visions of education. Such inquiry encourages us to ask: what is the purpose of curriculum? And, how does our curriculum work ultimately contribute to the education of the individual and the good of society? Through conceptual analysis we are able to clarify our beliefs and behaviors, to scrutinize the inconsistencies in our thoughts and actions -- to consider when our practices conflict with our goals and to ethically consider the consequences of our actions and aims." (Joseph et al, 2000, p.26)

This inquiry shares the above goals and proposes a framework that brings both moral and social dimensions to the analysis.

**Chapter Summary**

The use of conceptual analysis in curriculum review extends the value of the traditional analytic frameworks by enabling the reviewer to consider the theoretical underpinnings of curriculum and, in the case of the co-op inquiry, explore the extent to which these influence, and are influenced by, the very dynamic and multiple cultures that support co-op learning. A curricular inquiry for
co-op requires a flexible, multi-faceted approach that addresses the unique challenges of the contemporary co-op curriculum as well as the distinctive learning environments within which the curriculum unfolds. This inquiry rests upon an examination of co-op's origin and goals, an environmental scan of the co-op landscape, an analysis of the co-op research, and a review of contemporary curricular frameworks and learning theories. Following Mahung's (1980) three steps for the use of conceptual analysis in curricular reviews, an approach for curricular analysis is developed. A Phantom Curriculum is created based upon several North American co-op program preparatory curricula, proving the material from which a specific curricular element is selected for analysis.

Existing curriculum frameworks are examined and considered for their potential contribution to a co-op analytic framework. Taking an approach of informed eclecticism, several frameworks serve as lenses through which to view and analyze the selected curricular elements. The multiple views provided by the various framework lenses as they alternately move in and out of focus provide a poly-focal perspective from which new understandings of a given curricular element or event of practice may be derived. The varied perspectives provide not only an analysis of what is to be learned through co-op but also solicits deeper understandings of how, why and to what ends. In order to better understand the context within which the co-op curriculum is situated, the next chapter begins with a brief history of co-operative education followed by an
overview of some of the major changes in the co-op environment over the last century.
CHAPTER 3:
A CENTURY OF CO-OPERATIVE EDUCATION

Brief Overview and History of Co-operative Education

Co-operative education is an educational model adopted by many post-secondary institutions to complement the more traditional classroom-based learning and better prepare students for transition to the workplace. Work placements related to the students' academic disciplines are developed by the institution and competed for by students through traditional interview processes. The dominant form of co-op in Canada is the alternating model that has students moving between full-time school and full-time work every four or eight months. During the work term, the student's progress is monitored by the co-op education institution and is supervised and evaluated by the employer. The total co-operative work experience constitutes approximately 50% (minimally 30%) of the time spent in academic study, which for most university undergraduate programs, is four to six four-month long work terms. Each co-op work opportunity must meet the basic criteria of engaging the student in productive work, providing pay for the work performed, and ensuring an environment supportive of the student's learning.
Origins of Co-op

In 1890, Herman Schneider enrolled at Lehigh University in Bethlehem Pennsylvania as a student of architecture and engineering. As did many other middle class students of the time, he worked part-time and between semesters to help pay for his education. Upon graduation he opened his own architectural firm that he operated for five years prior to returning to his alma mater as an instructor in civil engineering. Upon his return to post-secondary, Schneider made several observations that were greatly influenced by his experiences in both industry and education. He determined that classroom education could never teach certain facets required for success in any profession and was convinced that these could only be learned through on-the-job contact with professionals already successful in the field. He also conducted a brief survey of engineering students and found that those who best grasped the subject matter of his courses also had practical engineering-related work experience. Schneider was also very aware that given the high cost of education many students had to work part-time while in school or during vacations in order to help pay for part of those costs. In many cases their jobs were unrelated to their studies and career objectives, and therefore did not advance their professional education in any substantial way (Park, 1943).

Schneider believed that the tools of engineering, as presented in texts and labs, would remain abstract concepts until students actually began to work with them. Only as the learner engaged more fully with the work environment and related
issues would questions arise about such things as design, function, human factors, etc. With motivation and curiosity aroused through their encounters with “real” problem situations, Schneider believed “the students’ thinking could then be directed along productive lines.” (Cates & Jones, 1999, p.13). While walking across campus one day considering these observations and how they might be resolved, it is said that Schneider was startled by the blast of a converter from a nearby steel mill. In that distraction was the opportunity he was looking for. Schneider had found a real world laboratory – a place where students could learn in an authentic setting with “the latest and most expensive equipment”, earn money to help with their studies, and make important contacts that could lead to employment after graduation. He approached local businessmen with his idea of integrating theory and practice by having students alternate periods of academic learning with periods of paid learning in their workplaces. Industry partners were keen and the first co-op model began to take shape. When little interest and support for his concept was demonstrated at Lehigh University, Schneider left and in 1903 moved to the University of Cincinnati (UC) where it was decided to give his proposed “co-operative system” a chance (albeit amidst very strong skepticism and opposition from many academics and the Board of Governors). Three years later, 27 engineering co-op students participated in the program. “Eager to put into practice what thus far had just been textbook theory”, 800 students applied to co-op the next year with 2,000 more applying to the program the year after that (Saikali, 1997).
Interest in co-op grew steadily, even through the Depression years, and by 1942 there were 30 programs in operation across the US. Co-op was suspended in the war years in favour of accelerated graduation but growth resumed again in 1946. In 1957, the University of Waterloo started the first Canadian co-op program based upon the Cincinnati Plan. By the late 1990's over 300,000 students were participating in co-operative education programs across North America (Houshmand and Papadakis, 2006; CAFCE 1999).

When the University of Cincinnati's Engineering Dean Herman Schneider first introduced the concept of linking classroom instruction with practice in 1906, he did so in an educational partnership with local industry. The goal of the program was twofold: 1. to enhance students' learning by bringing abstract concepts to life in the engineering workplace, and 2. to prepare great professional engineers. The first goal focuses directly on student learning while the second is more related to professional development. It was clear from its inception that the Co-operative Plan would benefit both the engineering employers and the students, all the while enhancing student learning. Schneider's original plan saw his engineering class divided into two sections, with half the students in class for a week while the other half worked. The students would meet him on the Saturday to make connections between the two learning environments before alternating to the new environment the following week. Dean Schneider's program was well structured, and the original syllabus illustrates clearly defined
learning outcomes that extend well beyond what one would expect from a traditional classroom-based course.

**Curricula Compared**

The original 1906 co-op curriculum sought to ensure that students acquired the following:

- A foundation in the basic principles of science;
- The ability to use these principles in practice;
- An understanding of engineering in general, as well as one of special departments;
- A working knowledge of business forms and processes;
- A knowledge of men as well as matter;
- An appreciation of humanity's best achievements;
- The ability to meet social requirements easily; and
- Drill and experience in the following essentials:
  - Doing one's best naturally and as a matter of course
  - Prompt and intelligent obedience to instruction
  - The ability to command intelligently and with toleration
  - Accuracy and systems
  - The ability to write clearly and concisely and present technical matter interestingly before an audience

These represent a combination of technical and practical skills, with the work placement providing the opportunity to put classroom-derived skills and knowledge into practice as well as to acquire new work-based skills and knowledge in the context in which they are used.

The original co-op syllabus presented by Professor Schneider in 1906 is copied in Table 1. It is interesting to note that the framework was borrowed from an
industry colleague, NCR President John Patterson, who used the format in industry to solicit engineering process suggestions from his staff. Dean Schneider and Patterson often exchanged ideas about education and industry. Patterson “obtained numerous practical hints concerning methods of training his employees...at the same time the Dean derived a number of ideas from Mr. Patterson” (Park, 1943. p.90) -- the first co-op syllabus framework being one.

Table 1: Original Syllabus of Herman Schneider, 1906 (Park, 1916)

<table>
<thead>
<tr>
<th>Objective</th>
<th>Method</th>
<th>Matter</th>
<th>Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>To provide engineering training from which the students will acquire:</td>
<td>Instruction in science and math</td>
<td>Chemistry, physics, math, economics, practical engineering projects</td>
<td>Class and lab work; co-ordination with practical experience</td>
</tr>
<tr>
<td>1. A foundation in the basic principles of science.</td>
<td>Gradual and natural advancement in practical work; concurrent training in theory and practice</td>
<td>An organized sequence in practical work. An organized sequence in science.</td>
<td>Co-operation with commercial concerns doing engineering work. Alternate periods spent at school ad at practical work.</td>
</tr>
<tr>
<td>2. Ability to use these principles in practice.</td>
<td>Varied exemplifications of theory in the classroom. Visits to a variety of engineering industries and different kinds of engineering.</td>
<td>Experiences of students in different types of work correlated with theory. Visits to waterworks, foundries, soap works, etc.</td>
<td>Illustrations furnished by coordinators and students. Organized shop visits.</td>
</tr>
<tr>
<td>3. An understanding of engineering in general, as well as one of special department.</td>
<td>Instruction in economics, management, etc. Reports on shop visits. Analysis of show processes. Practical experience in business forms and procedure.</td>
<td>Fundamental principles of economics, systems, forms, contracts, patents in engineering work.</td>
<td>Co-ordination of classroom work with students' experience. Practical training organized by coordinators to insure experience in business forms and processes.</td>
</tr>
<tr>
<td>4. A working knowledge of business forms and processes.</td>
<td>Personal work with men from laborers up to superintendent or managers. Instruction in basic elements of work.</td>
<td>Practical work from laboring to directing. Fatigue, wage systems, employment sanitation, etc.</td>
<td>Prearranged course of practical training.</td>
</tr>
<tr>
<td>5. A knowledge of men as well as matter.</td>
<td>By regulating promotion</td>
<td>Practical performance;</td>
<td>Constant supervision and...</td>
</tr>
<tr>
<td>Objective</td>
<td>Method</td>
<td>Matter</td>
<td>Mechanism</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>a. Doing one's best naturally as a matter of course.</td>
<td>work and pay on practical work. By maintaining a satisfactory standing on college work.</td>
<td>classroom performance.</td>
<td>criticism of student's practical work. Consultations by college officials on advancing students on the job. Internal co-ordination of college departments; conference on student work.</td>
</tr>
<tr>
<td>c. Ability to command intelligently and with toleration.</td>
<td>By gradual rise of positions of responsibility in the co-operating companies.</td>
<td>Practical jobs of more and more authority and responsibility. Personal experience in hard work. Fatigue, wage systems, methods, sanitations etc.</td>
<td>Success of student on practical and theoretical work checked by coordinators. Round table discussions in the shop management courses.</td>
</tr>
<tr>
<td>d. Accuracy and systems.</td>
<td>By practical work requiring mental and manual accuracy, and proceeds with a sequential orderliness. By insistence on accurate, orderly work.</td>
<td>Carefully selected jobs. Analyses of shop processes in class. All college courses.</td>
<td>Close familiarity with outside work through visits of coordinators. Coordination between departments to maintain standards.</td>
</tr>
<tr>
<td>e. Ability to write clearly and concisely, and to present technical matter interestingly before an audience.</td>
<td>By constantly requiring written work, a by requiring oral presentation of technical matter.</td>
<td>Reports on shop work. Reports on shop visits. Laboratory reports. Engineering society papers and discussions. Class practice under criticism.</td>
<td>Coordination with English in criticizing all written work. Engineering societies afford practice in oral presentations. Exercises presenting reports.</td>
</tr>
<tr>
<td>7. An appreciation of humanities best achievements.</td>
<td>Instruction in history and literature. Incidental instruction in art.</td>
<td>A general view of the development of civilization in both the useful and fine arts.</td>
<td>Class instruction ad reading. Daily contact with art; optional courses in music, drawing etc.</td>
</tr>
<tr>
<td>8. Ability to meet social requirements easily.</td>
<td></td>
<td></td>
<td>夃</td>
</tr>
</tbody>
</table>

This syllabus fully integrates the co-op work experience objectives with the engineering course objectives, creating a single course of study that attempts to blend theory and practice in a seamless learning experience for the co-op student. By way of contrast, the majority of the current co-op syllabi are distinct from the academic syllabi for the courses in which a student is enrolled.
Separate co-op curricula are often centrally designed and delivered to all co-op students regardless of discipline, most commonly through a workshop/lecture series or co-op preparation course. Below is an outline of the current Co-op 101: Career Success Strategies course at the University of Waterloo. This curriculum is from the largest co-op program in the world, and is quite typical of many from co-op programs across Canada and the US:

Co-op 101: Career Success Strategies  
University of Waterloo, Winter 2006

Jan. 6th  Co-op WORKS – A welcome to co-op and overview of how the co-op partnership works and what to expect in the years ahead.

Co-op Survival Skills 1 – How to get started, use JobMine (the online job posting system), and decide which jobs to apply to.

Resume Writing – Open the door to the interview! Gear your resume to what our employers say they are looking for by adopting our proven resume writing strategies.

Jan 10th and 11th Resume Blitz – have your revised resume critiqued. Sign up for your slot. You must be enrolled in Co-op 101 to participate.

Jan 13th Co-op Survival Skills 2 – In the trenches: indispensable information for successfully navigating the co-op online job search process.

Interview Skills – An inside look into the interview process: what to expect and how to prepare. Build your confidence by learning how to present yourself to your best advantage!

Workplace Safety – You are responsible for your own safety; learn how to protect yourself not only at work but at home too! Session presented by the Industrial Accident Prevention Association.

Jan 20th Co-op Survival Skills 3 – The last instalment of co-op procedures: work report requirements and the all important job
ranking process. Take this opportunity to get any of your remaining process-oriented questions answered.

**Protecting Your Professional Image** – Safeguard your professional reputation in the workplace by understanding how to resolve career-compromising situations.

**Jan 27th Employer/Student Perspective** – Get it from the source: a diverse group of co-op students and employers share their insights. Come prepared to ask questions.

**March 3rd Job Search Strategies** – networking, information interviews, traditional and online job boards, presentation skills etc.

The Co-op 101 series is complemented by an online Co-op Student Manual ([www.cecs.uwaterloo.ca/manual](http://www.cecs.uwaterloo.ca/manual)) which covers the following topics: career development, co-op administrative requirements, job search and interview skills, learning objectives, work related links (e.g. medical insurance, intellectual property issues, site visits, length of term, vacation etc.), work report requirements, financial information (e.g. fees, loans, taxes), and an outline of employer/student/institutional roles.

While the two curricula are quite different, many of the ideas outlined in the original 1906 syllabus, and which formed the core underlying principles of co-op, remain true in the contemporary model. Co-op programs today continue to alternate periods of learning in school with learning at work, with the university responsible for the administration, academic and preparatory curricula, and grading of the co-op work placements. Work supervisors still provide feedback and performance evaluations to the students who continue to use the work term to both apply theories and techniques learned in school as well as experience.
new learning in context. The model has now extended well beyond its roots in engineering into business, science and the arts, and co-op has necessarily broadened its original focus on technical learning to include the less applied disciplines. Many of the non-technical skill outcomes sought by Schneider such as work ethic, leadership, learning about self through working with others, attention to detail, communication, knowledge of business processes, and the ability to take instruction still apply today, though it is rare to see them stated in syllabi as explicitly as they were in 1906. These skills today would be subsumed under the umbrella of employability skills, often talked about as "transferable" or "soft" skills, but with little attention paid to helping students understand how they are developed or transferred.

In many ways remarkably little has changed in terms of the co-op model after a century of co-op (Cates & Langford, 2006). The basic concept has been retained, students blending workplace with school-based learning, and the university has remained primarily responsible for the co-operative relationship. However, upon examination of the original and contemporary curricula, a few important and perhaps disturbing changes are apparent. Key among these is the change in the focus of the curricular objectives: from the student learning outcomes articulated by Schneider to a set of much more pragmatic outcomes focusing on the processes, information, and tools students need to secure, and progress in, a co-op job. This shift away from a "student development" model towards a "job readiness/placement" model is concerning. While both apparently
center on the student, the former focuses specifically on assisting the student as a learner while the latter focuses more on preparing the student as a worker (product). Although his Co-operative Plan would surely produce better engineers for industry, Schneider's clear pedagogical focus was on student learning and development. In an educational survey conducted 1911-1913, Dean Schneider noted that: "It has been demonstrated that the school and the shop can work together if the common ground is the mutually safe ground of the mental, physical, and moral advancement of the (student) workers" (Park, 1943, p. 147). When the student’s holistic development is no longer the "common ground" between the academy and the workplace, one must question what is. The production model of co-op alluded to earlier presents a troublesome potential for the subjugation of student development to the rapidly changing human resource needs of government, business, and industry. In the very competitive, and now international, world of co-op job development, it is easy to see how program administrators might be tempted to produce, through their students, precisely what an employer wants in order to optimize student and graduate placements. In a June 2006 online publication (http://www.columbusdispatch.com/business-story.php?story=dispatch/2006/06/13/20060613-E1-03.html) Eduventures LLC, a Boston-based education and industry research organization, reports that universities are making more concerted efforts to "court the business marketplace" and the Dean of Northeastern University’s College of Business Administration, Thomas Moore, acknowledges that his university "interviews companies to learn exactly what they want in graduates" in order to ensure a
mutually beneficial business partnership. Should this tendency become a dominant scenario (a trend discussed in more detail later this chapter), co-operative education is at risk of being seen as an arm’s length tool of the employer community -- potentially forsaking the significant personal and social transformative potential of the model in exchange for higher co-op and graduate placement numbers.

Another major shift noted when comparing the two curricula again pertains to student learning. In 1906 there was clear integration of classroom and workplace learning through various activities: the syllabi were combined, students met with their professor weekly to discuss and make connections between their school and workplace learning, students presented work-based reports in class, college departments co-ordinated with each other regarding their co-op syllabi, work-derived examples were brought into the classroom, and classes made regular field trips to various local engineering shops. In the 2006 sample curriculum there is very little content specifically aimed at helping students make these connections in their learning. As noted, the contemporary co-op and course curricula are entirely separate entities, one for the co-op preparatory course and separate syllabi for each of the academic courses in which the student is registered. There is no formal connection between them.

In most co-op institutions in North America, non-tenure track staff or faculty manage the co-op programs and there is little direct contact between teaching
faculty (those faculty aligned with traditional academic disciplines) and faculty co-ordinators (those involved in the day to day functions and operations of co-op programs) with respect to the linking of curricula. While many teaching faculty express positive attitudes towards co-op as having educational value, there has in fact been a growing distance between co-op and the academic side of universities over the past 100 years. A recent study of the six largest co-op engineering programs in the United States determined that “faculty utilization of classroom integration activities (related to co-op) is extremely limited” (Contomanolis, 2006, p.46). This is especially troublesome in an applied program such as engineering that had obvious opportunities for the integration of real world examples and upon which the co-op model was founded. The problem is further intensified in less applied co-op disciplines where the connections between the academic program and the co-op workplace are not as obvious. This growing separation of the academy from the workplace within the co-op model may be understandable given the tremendous external focus of co-op (Heinemann and DeFalco, 1990). This may be exacerbated by reports from co-op students that their most important learning occurs on the work term, not in the classroom (Johnston, Angerilli, & Gajdamaschko, 2003; Grosjean, 2003). This is however, a major departure from the model envisioned and implemented by Schneider, wherein the workplace and classroom were equally valued and served to mutually enhance the learning occurring in each environment. Several practices noted in the original syllabus reflect this notion and it is clear that Dean Schneider, as a teaching faculty member, worked directly with industry
supervisors to ensure students integrated their learning. Additionally, the weekly meetings held by the Professor with students as they moved between their school and work placements further underscored the critical role played by the university in this regard.

This change is significant and is further underscored in a recent study recommending co-op programs "aggressively seek ways to better orient, prepare, and encourage (teaching) faculty to maximize the (co-op) student's learning experience" (Contomanolis, 2006). Left to their own meaning-making, students do not typically make these connections and often report no workplace-relevant learning occurs in the classroom and vice versa. Differences in the academic and workplace contexts make such cognitive bridging challenging. Recently attempts have been made by the academy to better link the two learning environments including the awarding of credits for work terms, and the setting of learning objectives for work terms, but these have often been driven by administrative goals and only superficially address the pedagogical challenge. The present day academy consciously positions the value of cognitive knowledge over the development of procedural knowledge and practical skills (Grosjean, 2003). While the alternating model of co-op provides the potential for the two learning contexts to enrich each other and the overall learning experience for the student, in the absence of explicit curricular mediation such as those described in the original syllabus (regular discussions with students, field trips, co-op reports in class, industry and academy idea
exchanges etc.), this potential now remains largely untapped. This change signals a significant loss of the learning power evident in the original co-op model. If the contemporary model continues to focus more on job search and career progression skills, with no explicit attempts to connect the co-op learning back to the academic course of study (and vice versa), co-op will develop more as a placement model than an educational model, resulting in a major departure from Dean Schneider's original vision.

Of course some change over the one hundred years of co-op is to be expected. As Schneider himself stated "adjustments will be constantly needed to meet unforeseen conditions and to keep the school and shop work running smoothly" (Park, 1943, p.146). This was underscored in a 1916, U.S. Bureau of Education Bulletin No. 37 which notes that "given the changing conditions in the job market some level of elasticity in program administration is necessary assuming the fundamental pedagogical and guiding principles are not compromised". But, as noted above, compromise of the kind Schneider spoke appears to be occurring. Key among the pedagogical and guiding principles Schneider articulated is the university's responsibility for ensuring that students are "prepared academically and understand the relationship between classroom theory and practical application". Furthermore, Schneider believed it was also the university's responsibility to "devise methods in which the student, while at work, is led to observe and think for himself" (Park, 1943). These notions of praxis and self-direction are key to the learning-centered model described in 1906, and are
notably absent from the sample preparation of co-op students some one hundred years later. While federal funding in the 1970's and 1980's in both the United States and Canada led to the proliferation of co-operative education programs, many programs (especially after funding halted) remain unaccredited and therefore not bound to the guiding principles proposed by Schneider. Experimentation with several of the underlying concepts of the original model has resulted in a multitude of experiential education models in addition to traditional co-op creating some confusion and quality issues for all stakeholders (Cates & Langford, 2006).

Nevertheless it can be argued that overall, and from an outsider's perspective, the co-op model has proven to be remarkably resilient in its first one hundred years. Given its apparent stability during a period that has been exceedingly dynamic on other fronts, one is left to wonder how an educational partnership between employers (governments, business, industry and NGOs) and education has remained so unchanged. To underscore how dynamic the environment has been, and to help better understand the pressures faced by the developing co-op model (and its curriculum), the next section provides a brief overview of the rapidly changing context within which co-operative education has persisted and grown.
Changes Affecting the Co-op Landscape

With the introduction of the “co-operative system” at the University of Cincinnati in 1906, traditional post-secondary education took a major step towards more formally acknowledging the value of learning through experience. In the midst of the progressive educational movement in the United States, and in the spirit of his contemporary John Dewey, Dean Herman Schneider was the first to implement a plan that formally linked scholarship and practice, extending post-secondary education beyond the walls of the school and into the workplace. But much has changed in the co-op environment since Schneider’s Plan was first implemented and many of these changes, I will argue, have significantly impacted upon co-op’s purpose, place, and practices within the post-secondary milieu.

Co-op involves three critical but very different partners (students, employers, and institutions), operates across two distinct learning environments (academia and the workplace), and involves multiple employers locally, nationally and globally (small and medium businesses, not for profit organizations, corporations, governments, multinational global enterprises, and NGOs, to name a few). Change in any one of the stakeholders’ environments necessarily impacts on the model. It is reasonable to expect that the curriculum, policies and practices of co-op would respond to any significant change in any of the stakeholder environments. As noted, some critical changes to the co-op model have occurred though not as a result of conscious deliberation by co-op leaders
or thoughtful intention. Moreover, co-op programs have quietly evolved incrementally over the years, responding differently in different contexts so as to remain relevant to employers, and viable within their institution. As a result the model has lost some integrity and clarity of purpose, making curriculum design and delivery an even greater challenge. Below are some of the major changes that have influenced the co-op model in its first one hundred years.

- A shift from an industrial- to information-based economy
- The proliferation of the model in post-secondary
- The diversification of the co-op model
- The changing role of the employer and needs of the students
- The nature of workplace culture
- Shifts in the philosophical perspectives of society
- Evolving stakeholder expectations of the model
- The changing role of the university in society
- Globalization
- New understandings regarding teaching and learning

The next section expands on the above noted changes in the co-op landscape and examines the potential curricular implications and considerations that such changes have, or should have, precipitated.

**From the Industrial Age to the Information Age**

Perhaps the single greatest change in the co-op landscape in its first one hundred years as an educational model is the massive economic shift that has taken North America from an industrial-based economy in the early 1900's to today's knowledge- or information-based economy. With its start in professional engineering, co-op was indeed a phenomenon of the industrialized world. It continues today to work well for many students and employers in industrial
settings, though has certainly grown beyond these technical roots. As the North American economic base has changed, and as new academic programs in less applied areas have adopted the co-op model, co-op has expanded beyond its initial industrial partners to include employers in business, the public sector, not-for-profit agencies and knowledge industries. The underlying assumption is that co-op has been, and should remain, a contributor to the nation’s economic agenda. Schneider himself proclaimed the value of his Co-operative Plan as one that would graduate more “skilled engineers, safe businessmen, and broadly talented and intelligent citizens” upon which depends “the industrial welfare of the nation” (Park, 1943, p.58). While co-op’s role with respect to the economic agenda is debatable (and is explored later this chapter when the changing role of the university is examined), it remains true that co-op practitioners have, at least implicitly, supported the nation’s economic agenda by ensuring that the model evolved sufficiently for it to remain a viable option for a growing numbers of employers in the ever changing economy. The close relationship between co-op and industry is such that “it is almost impossible to discuss the history of co-operative education without simultaneously chronicling the economic, political, and social history of the U.S.” (Houschmand & Papakadis, 2006, p.4). Whether through a conscious strategic decision by co-op leaders or through a more gradual evolutionary response to the many changes in the environment, co-op has managed to broaden its employer and student bases over the course of these significant economic, political, and social shifts. Co-op was suspended during WWI at the request of the U.S. government so that physically qualified
students could enter the Student Army Training Corp. Later during the Great Depression when many large employers were facing massive layoffs, co-op programs turned to smaller factories outside of Cincinnati and across the state, and lengthened the time between school and work alternation so as to extend the work term and create greater value for these smaller companies that could not afford the frequent orientation periods. The University of Cincinnati (UC) co-op program became very “creative” about the nature of the work found for its financially strapped students (one engineering student worked in retail sales, another in childcare) but despite the times, co-op prevailed through the Great Depression and continued to expand.

In the 1930’s, many co-op students worked for both union and non-union shops, during which time favourable relations were developed with both types of employers. The unions, initially sceptical that co-op “might be a scheme to train strike breakers” eventually agreed to hire students as students (versus apprentices) -- they would pay monthly union dues, could attend meetings but were not permitted to picket or break strikes (Reilly, 2006). The extent to which students were explicitly learning about labour/management relations is unclear but conditions were supportive for co-op employment in many unionized environments. Today thousands of co-op students also work within union environments, some of which have clauses in their collective agreements that specifically support co-op. As the economy moved more and more quickly into the information age, many of the new economy co-op opportunities emerged in
the Information Technology field. This burgeoning sector is largely non-unionized, particularly in the many small and medium sized companies. The work cultures of firms in this very fast-paced and highly competitive sector are much less regulated and long hours are often the norm. Co-op programs have managed these highly variable work environments in a number of ways, largely by ensuring that local labour codes and safety practices are followed. Beyond that, it appears that very few co-op curricula explicitly include discussions about workplace practices, labour-management relations, leading workplace change, corporate social responsibility, etc. -- even though it is clear that co-op students find themselves on the front lines of many of these issues.

A small number of female co-op students (known as “co-eps”) began at the University of Cincinnati in 1920. The First and Second World Wars greatly spurred the entry of women into the workforce due to the shortage of male workers and co-operative employers, after some initial reluctance, began hiring women for production positions.

In 1943, the Frigidaire Company in Dayton, Ohio, hired its first woman co-op as a test case. By October 1944, eight female co-ops were with the company, then producing aircraft propellers and machine guns in lieu of refrigerators...And co-op made the difference in preparing UC women to competently take on manufacturing jobs. (Reilly, 2006, p. 88)

After the boom of the war years, the economy shifted increasingly away from its manufacturing and production base towards an information and knowledge base. Developing workers for this new economy was substantially different than
developing workers for an industrial and manufacturing based economy. Employers in the new economy seek workers with broader educational perspectives as well as a solid set of information technology skills. Critical thinkers, analysts and information integrators are sought-after graduates. With the rapid pace of innovation, simply developing technically competent engineers (or any other professional) is no longer sufficient for the modern global economy. The academic curricula in many engineering and other professional schools have changed to reflect this with many now including more non-technical or "soft" skills (communication, project management, etc.) in addition to technical skills.

There is however little evidence that co-op curriculum developers have considered and incorporated the implications of this major economic shift into the co-op curriculum. Herman Schneider was very much interested in helping his young engineering students "learn by doing" and believed they would also learn better in the classroom by having a directly relevant context within which to situate their book knowledge. But what happens when the application of book knowledge is not so readily obvious (e.g. a philosophy co-op student's placement in government) or even out of step with what is happening in business and industry (e.g. institutions continuing to teach a computing language no longer used in business and industry)? The expansion of co-op beyond the applied programs for which it was originally designed coupled with rapid technological and workplace changes has created a situation where
“learning to do” may become less critical than “learning to learn”. Self-direction has become a much more desirable trait than the “prompt and intelligent obedience to instruction” noted as a learning outcome by Schneider. Learning by trial and error and through collaborative processes that challenge the status quo, has become much more relevant in today’s workplaces than adopting the “appropriate behaviours expected” in the more rigid, authoritative structures that defined workplaces in the early 1900’s. It is questionable the extent to which co-op has formally recognized this and supported such changes in both its curricular content and practices. Does co-op encourage the development of collaboration and teamwork skills (e.g. allow for the submission of team work reports, include team performance or peer evaluations as major components of the student’s evaluation, etc.)? How does the co-op curriculum support and value students wanting to enact change in their workplaces, or join their fellow workers in a protest? What are students told about self-management and self-direction, how it looks in action, and how it relates to the seemingly contradictory notion of following instructions? The move from an industrial economy to the knowledge-based economy necessitates a completely new set of skills for learners to effectively contribute to, and to learn from, the new environment. As Linn (2003) notes:

“Now with the decline of the industrial age and the advent of society based on knowledge, it is again difficult to foresee the futures our students will find for themselves. Learning about the self by risking new settings, new challenges and new demands may be the most effective learning that higher education can offer. (In Linn, Howard, and Miller, 2003, p.26)
Co-op education provides an ideal model for providing such new challenges and demands but must seriously review the extent to which it is supporting these learning opportunities through its curricula and practices.

**The Unexpected Growth of the Model**

In spite of the very strong initial resistance by many post-secondary institutions to the co-op model, major shifts in the economic base in which co-op operates, two world wars, and many other de-stabilizing world events, the co-op model has continued to grow and thrive. From the original pioneering schools (the University of Cincinnati in the United States and the University of Waterloo in Canada) grew hundreds of participating post-secondary institutions now representing thousands of co-op students across North America. Worldwide the co-op model has also grown as part of a larger movement toward Work Integrated Learning (WIL) and the World Association for Co-operative Education currently has close to 50 countries with active WIL programs. Related models such as service learning (work experience in community projects that are generally unpaid and usually integrated with an academic course), internships (longer periods of both paid and unpaid relevant work, typically at the end of the student’s academic career) and job shadowing (observing professionals in their work environment) are among the more commonly seen models in academia. This growth has certainly validated the interest in work experience programs by students, industry, and post-secondary institutions but it also greatly increases the competition for work placements among competing models and creates possible confusion for both students and employers regarding the relative
suitability of each model with respect to their needs. There is a need to clarify the goals and purposes of each model for the various stakeholders and to support those stated purposes through appropriate policies, practices and curricula. In some cases, the work integrated learning models are not fundamentally different but rather variations on a theme to meet local needs. This graying of "what is co-op and what is not" has been occurring for some time and, in the United States, is reflected in the original Co-operative Education Association (CEA) expanding its mandate and name to include Co-operative Education and Internships (CEIA). In 2006, less than 20 U.S. programs are accredited as "fully co-op", using the articulated model described by the National Commission on Co-operative Education (NCCE) and generally following the original pedagogical and philosophical principles articulated by Schneider. In Canada there is much more homogeneity in co-op, and a much higher percentage of fully accredited programs at the post-secondary level, however there is also an increasing number of programs choosing not to become accredited.

A second implication of the significant growth of co-op programs results from the increased competition to find relevant, paid, work placements for students. With so many educational models seeking workplace experiences for students, and co-op having the additional challenge of finding only paid placements, co-op programs are under tremendous pressure to ensure employers satisfaction. To this end, many co-op programs tailor services and student preparation directly to
meet employer needs. They may also be tempted to accept co-op positions that are not as clearly related to the students' course of studies in order to secure the number of positions required for their program. In my experience as a practitioner and external reviewer of several Canadian co-op programs, issues regarding job relevance, job quality, and stakeholder bias (a sense that the employers are favoured in the placement or matching process) are of growing concern, especially among students. As co-op opportunities mirror the job market, it is reasonable to expect fluctuations in the quality and relevance of co-op jobs from time to time in response to market shifts and adjustments (such as was reported in the UC program during the Great Depression). However, a continuous stream of co-op positions that appear to be unrelated to the students' learning goals will ultimately jeopardize the co-op model, as employers and students no longer share a common set of learning expectations.

Additionally, there are many co-op jobs that may be relevant to student learning but for which the relevance is not immediately obvious to students (particularly for students in the less applied disciplines). Again the connection-making needs to be prompted and made explicit, and academic and career objectives need to be linked. This can be directly addressed in a preparatory curriculum that includes such topics as making connections between seemingly unrelated activities (reflection in and on practice), assessing workplace/term quality (critical analysis and constructive change management skills), linking personal, academic and career goals, and transferring knowledge and skills
(metacognition and practice). These are not topic areas typically included in most North American co-op preparatory programs but they may serve to help with some of the challenges resulting from the growth of work integrated learning models in a very competitive and volatile job development market.

Changes in the Co-op Format

In addition to the proliferation of work integrated learning models, there have been some changes to the co-op format itself. In the original model Dean Schneider split his engineering class into two, with half the students going to school for one week while the other half were at work, then switching the following week. The students and professor would meet weekly to discuss their learning and make connections between school and work. This is clearly not a format that is scalable or practical in today’s academic and work worlds. More typically now in Canada, co-op students alternate four or eight months (one or two semesters) of school-based learning with four or eight month long periods of work-based learning. Other models include one extended co-op internship, typically twelve months in duration near the end of one’s academic career and parallel co-op, concurrent part-time work and part-time school (CAFCE Accreditation, 2005). In each of the co-op formats (alternating, internship, and parallel) the student learning is typically monitored by a university based co-op co-ordinator (versus teaching faculty) through site visits, either in person or via phone and e-mail. Most connections between students and academic faculty are informal, the result of an interested faculty member who invites the co-op experience into their classroom or a keen co-op student.
that raises it on his or her own. This is a significant change from Schneider's original format, and one that marginalizes co-op from its original central position within academia. Often seen as administrative or service units, many contemporary co-op programs are quite disconnected from the faculties they serve, and because of co-op's "vocational" association, may not be regarded as academically legitimate (Kerka, 1999). This troublesome trend greatly reduces the "connection-" and "meaning-" making opportunities for students to link their experience to their studies. It also implicitly reduces the value or legitimacy of the students' work experiences when they are not recognized by faculty members who hold positions of authority, respect, and power on campus. In the absence of co-op learning explicitly occurring within the context of a course as it did in the original model, it is imperative that co-op programs ensure that opportunities for integration and legitimization of workplace learning are embedded in the co-op curriculum.

The Changing Role of the Employer and Needs of the Students

As job development pressures continue to rise, many programs actively seek to increase the input of employers in an effort to ensure their direction and activities are consistent with employers' needs and feedback. In many prominent co-op institutions, Employer Advisory Boards have been created to inform program direction, employers actively participate in the development and delivery of co-op preparatory curricula (online, through panel presentations, as workshop leaders, etc.), and employer surveys are regularly used as tools to inform program direction and content. While an excellent means of engaging
employers as co-educators and staying abreast of employer issues, such involvement needs to occur within a very clear and explicit understanding regarding the purposes of co-op and the intended primary beneficiaries of co-op, both of which should ultimately determine curricular direction.

Underlying many co-op programs' student preparatory curricula is the notion that co-op's main role is to ensure that students adopt the characteristics of an ideal worker (as defined by the employers) so that they are readily placed in co-op jobs. It is the employers' needs that drive the content of this particular part of the curriculum. The institutions are motivated to meet the employers' needs in an effort to place as many students as possible. These placement numbers are often used by administrators as the primary indicator of a co-op program's "success". The notion that co-op's role is to assist in a student's overall growth and development (encouraging and supporting independent thinking or taking an active role in social change) is rarely, if ever, explored, much less measured. In many cases, students that don't "fit" into the work placements that co-op programs have developed are often viewed as problems and the remedial work consists of helping the student better understand and value the employers' needs. Alternatively these students are also encouraged to find their own jobs. The ability to see various perspectives and conduct one's own job search are important skills only recently added to some co-op programs' curricula. Historically the presumption has been that the co-op program develops all the
co-op jobs and one should make every effort to “fit into” them rather than question, critique, or ultimately seek to improve on them.

Co-op programs could benefit from explicitly defining the characteristics of their “ideal” student (appropriately skilled and eager job ready worker, or critical and eager work changer/enhancer, or are both possible?), particularly as they expand beyond their technical roots in the applied sciences. In the absence of institutionally directed outcomes, co-op programs will naturally default to employer-driven outcomes. The interests and goals of most Women’s Studies, or Sociology, or Political Science student are quite different from those of an Engineering, Computing, or Business student. The workplace cultures into which each of these students is typically immersed also tend to be quite different. As the co-op model expanded somewhat organically into the Arts, Humanities and Social Sciences in particular, little formal attention was paid to implications regarding student and employer expectations and motivations.

It is not surprising that the co-op model had its start in engineering. The vision was to provide a real world laboratory for students to apply their school derived knowledge and develop as professionals. This focused vision is not as appropriate for many of the other disciplines into which the co-op model has expanded for which there may be multiple professional end-points. For the model to simply replicate itself in Faculties of Arts and Social Sciences and in not-for-profit workplaces as if it were designed to meet their unique needs may
be at the root of the many challenges these newer programs have faced in their
growth and development. Engineering students study to become engineers
because most have already decided that this is the profession they wish to enter
and have clear goals relating to their professional transition. Students in non-
applied or non-professional university programs often have less specific career
goals and are interested in the value of a liberal arts education for the breadth it
offers academically and career-wise. They appreciate the opportunity to develop
their critical thinking, writing and analysis skills unencumbered by a particular
professional application. These students are also more likely to be exploring a
wide variety of career options through co-op since there is often no single
vocational end point such as engineer, nurse or computer scientist. They may
experience a wide variety of employers in a variety of fields versus the narrower
exploration of a particular specialization or company engaged in by many of the
applied or professional students. It is easy to see how having the opportunity to
help design or build a bridge is useful, educationally relevant, and vocationally
desirable for a young civil engineer. But what tools, knowledge, and experience
does co-op provide the young Anthropology student designing surveys for a
government ministry or the English major working at a children's day camp, to
help them see and understand how their co-op job is relevant, educational, and
transferable to future employment? While the connection-making opportunities
noted above are key for co-op in general, they are absolutely critical for students
and employers in the less applied areas into which the co-op model has expanded.
All of this is exacerbated by a sense that many co-op practitioners expect that the integration and connection-making required for students to see the relevance between their work and goals, and understand and transfer their learning to new contexts, will naturally result from their work term experience. In some instances this is the case, in many more it is not. This is a very important area of content (meaning and connection making, skills and knowledge transfer) that is of growing importance for most co-op preparatory curricula, particularly as programs expand into the less applied disciplines.

**Changes in Workplace Culture**

In addition to changes in the economic base, the role of the employer, and the expansion of the co-op model into the arts and humanities and across the world, there have been fundamental changes in the nature of the North American workforce over the past century. As the workforce and workplace provide the critical teachers and classrooms of the co-op workplace learning, co-op programs are inevitably affected by many of these shifts.

As noted, the first women “co-eps” joined the workforce in the 1920’s and their numbers steadily grew, especially during the war years. Many more women now participate in a wide variety of jobs and positions, and comprise a large percentage of the North American workforce. Students need to be prepared to work with and for women, arguably a different dynamic than working with and for men, regardless of their cultural background. As well, since the latter part of the
20th century, many full-time continuing positions have given way to increasingly part-time and contract work and students need to adjust their expectations about what a “good” job now looks like. The may have to re-visit the notion that there is a Monday to Friday, nine to five, “dental plan” position awaiting them and re-frame their expectations to better reflect the nature of the new work that is available – often contract or part-time in nature.

There has also a tremendous impact on the notion of time and its role in the workplace. Knowledge and information is multiplying at a rapid pace and is increasingly accessible, people are expected to stay abreast of relevant information which is an almost impossible task. Technology is changing the way we do business and tools are increasing the expectations for immediate and informed responses. With industry cycles (time from conception to launch) also becoming dramatically shorter, the pace of most workplaces has significantly increased in recent years. Since it differs noticeably from the pace of academia, many students struggle with both this realization and the lack of prioritizing and project management skills that can assist.

Additionally small businesses have become the driving engines of the new economy, and those environments are very different from the large manufacturing and corporate settings that dominated early co-op growth. In these new environments students need to be prepared to multi-task and take on multiple roles within the organization. They need to develop entrepreneurial
thinking and behaviours. While unions remain major employers of co-op students, their role has been diminishing in certain sectors, particularly where small, medium, and “start up” businesses prevail.

All these changes have significant implications for co-op preparation in terms of both subject matter and format. Students need to become lifelong learners and learn to discover and direct their own learning opportunities. Perhaps the most significant shift in the culture of work with respect to co-op has been the demise of the “cradle to grave” job in almost every sector. No longer is it reasonable to expect to work for one or even two employers in one’s career. Experts now predict five to seven career changes for the average employee. This radically changes the nature of a career transition program such as co-op. Instead of preparing students to enter a lifelong career such as was the case for most of Hermann Schneider’s engineering students, co-op jobs now need to prepare students for multiple careers, potentially across disciplines areas, often involving further education. The skills and knowledge required to ensure these effective transitions are very different. The singular focus on standards of professional practice and specific technical skills must now be complemented with a broader set of employability skills that include self-direction, skills transfer, and the ability to “transform the kinds of identities we need to build a life of learning “ (Wenger, keynote address, WACE, 2005). A co-op curriculum that supports such outcomes must help students learn how to learn and mobilize their knowledge.
and skills to effectively navigate the multiple career identities and cultures they will encounter.

A Change of Mood: From Industrial Optimism to Post-Modern Cynicism

Along with a change in the culture of the workplace comes a change in the way the public views many workplaces. The optimism of the industrial era has given way, in the late 20th century, to a feeling of distrust and disillusionment with many areas of government, and a cynicism with respect to the social and moral integrity of many major corporations and their leaders. Referring to the recent spate of scandals that have followed the collapse of Enron, Bakan (2004) writes that "people's distrust of corporations is high, perhaps as high as it was during the Great Depression" and warns that "capitalism is facing a crisis." (p.142) For many, capitalism has not kept its promises and the resultant inequities have become increasingly obvious and unacceptable, even to those who have enjoyed its privilege. Similar disillusionment has been evident in the public's faith in government for many years. In co-op's early years the promise of the industrial revolution held much hope for the economy and students had clear goals to get the best education they could in order to transition smoothly into their lifelong careers. Within the contemporary notion of multiple careers, lifelong learning and a growing sense of personal and social responsibility, it is not safe to assume that every co-op's student's goal is to become the ideal worker and assimilate into the existing system. Neither, however, is it safe to assume that all co-op students have the goal of challenging their assumptions about the existing
workplace in order to change it. What it is safe to assume is that there are co-op students in both these goal areas. Many students, particularly in the applied fields (business, engineering, computing), see co-op primarily as a vehicle to get a head start in their professional field of choice and have no inclination to analyze or critique the very organizations in which they aspire to work. Other students may come to co-op with broader goals of exploring various work options, better understanding the culture of particular employer types, engaging in community development projects, and learning more about their options post graduation. Each of these groups of students would benefit from very different types of preparatory curricula if their interests were to be supported. Before a co-op program can effectively design and deliver the appropriate educational curricula it needs to clarify the desired learning outcomes for its students and make them explicit.

**Evolving Stakeholder Expectations**

With all these changes in the co-op landscape it is not surprising that there have also been changes in stakeholder expectations. Co-op employers', students', and institutions' expectations of the model have evolved over time and these changed expectations need to be considered when conceptualizing a contemporary curriculum for co-operative education. From Table 2 it would appear that student expectations have remained the most consistent over time. Generally speaking, students participate in co-op programs in order to make money while they go through school and to get a head start on their career(s).
While the early engineering students were looking to develop their applied technical and work skills, current co-op students wish to do that as well as develop the general employability skills that are increasingly in demand in the new global economy and explore their various career possibilities. This would indicate that the contemporary co-op curriculum needs to address both helping students apply knowledge and theory from school as well as develop new understandings and skills of a more generic nature and learn how to apply them across contexts. Given the current expectation of multiple job and career changes, the modern co-op curriculum needs to explicitly include such topics as career and change management, skill and knowledge transfer, self-direction, and work world trends. For those students that participate in co-op programs primarily to secure a job, they may be less receptive to the addition of this content to the curriculum. On the other hand if a co-operative education program primarily fulfills a job placement function, it has a very different place within the academy than was originally intended.

From the employers’ perspective, their interest in accessing quality future workers remains a priority. Schneider articulated an “economic justification” for employer involvement in his Co-operative Plan that went beyond a “days work for a day’s wages”. He felt the connection to the academy would increase industry’s access to both “personnel and research” (Park, 1943, p. 96). Current co-op employers share in this same access, and generally demonstrate a keen interest in providing feedback to academic institutions regarding curriculum,
strategic direction, etc. However, chief among contemporary employers’ interests remains their ability to test and recruit the best students they can for full-time hiring of graduates and co-op provides them with early access and a formal mechanism for assessing their suitability.

Perhaps the biggest changes have occurred in the way that institutions have positioned co-operative education over the years. As noted in Table 2, the original Co-operative Plan was reluctantly accepted by the University of Cincinnati and it would not be until the co-op model became an unquestionable success that the institution fully embraced it. Fifty years later in working class southern Ontario, a new university was being conceived. It consciously chose to distinguish itself by boldly adopting the Co-operative Plan for all of its engineering students, again amidst scepticism and resistance from other Canadian universities. The University of Waterloo now has the largest co-op program in the world and has successfully branded itself through this model of education. It is the expectation of every Waterloo co-op students that they will placed, each and every co-op term, in quality co-op positions which will ultimately enhance their career potential (Johnston et al., 2005). These expectations, often fuelled by recruitment and promotional materials that heavily promote co-op, are a very tall order for a multi-disciplinary program that needs to place over 12,000 students per year. This is particularly ambitious in the increasingly competitive and rapidly changing job development environment. Some curricular intervention will be needed to mediate the growing gap between
student expectations of co-op and the current co-op reality or student dissatisfaction will continue to grow.

In addition to institutions using co-op for recruitment purposes, some also see it as a form of financial assistance. It has also been noted that the original Co-operative Plan, which enabled students to earn a salary while gaining experience, would “allow many worthy young men to attend school who otherwise would be excluded [for lack of financial resources]” (Park, 1916). Some researchers suggest that Schneider designed co-op to increase access for those less financially privileged students (Grubb & Villeneuve, 1995) and that it is his “very admirable social and instrumental concerns that are most often identified as the underpinnings of the original co-operative education model” (Van Gyn & Grove-White, 2004). Schneider himself noted that it was primarily his observations about how students learned that led him to develop the co-op model (Cates and Jones, 1999). However, he had also observed that many students, like himself, needed to work in order to make enough money to attend university and noted that these jobs were often unrelated to their studies. Whether it was Schneider’s pragmatism which determined that if these students had to work anyway, they might as well do so in related jobs that would enhance relevant learning as well as their financial status, or his idealism in wanting to improve access for those in financial need, the expectation of “paid” work is firmly embedded in the roots of co-op. Ironically current research indicates that most co-op students now come from middle class families versus lower or
working class families (Rowe, 2005), and therefore may rely less upon the model for immediate money.

Whether a social equity agenda explicitly underpinned the original co-op model or not, the fact that co-op students earn a salary is the single biggest defining factor distinguishing co-op from many other models of work integrated learning. If there is such an access agenda for modern day co-op, it needs to be clearly articulated, as it is not evident in contemporary co-op statements of purpose in either the United States or Canada, nor measured as an outcome by most programs (other than studies indicating that co-op graduates enjoy a smaller debt-load than regular students).

Expectations for co-op have also changed at the institutional level as the role of the universities themselves undergoes review. As discussed, most universities are now aware of the recruitment power of co-op, even for top academic students, and co-op is also often cited as an excellent example of how the institution is meeting its public accountability contract and reaching out to the communities it serves. Many academics strongly believe in the value of experiential learning and support co-op as a complementary educational model that enriches classroom and overall learning. However, many others question the role of co-op in the academy and this ongoing debate is firmly rooted in differing philosophical orientations regarding the role of the university in society.
### Table 2: Changing Stakeholder Expectations

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Original Goals/Purpose</th>
<th>Contemporary Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student</strong></td>
<td><strong>Original Goals/Purpose</strong></td>
<td><strong>Contemporary Purpose</strong></td>
</tr>
<tr>
<td></td>
<td>Earn needed money and arrive at a &quot;suitable type of work&quot; via industry contact</td>
<td>Earn needed/wanted money</td>
</tr>
<tr>
<td></td>
<td>Connect theory &amp; practice to enhance learning in both school and workplace</td>
<td>Explore multiple career possibilities; adjust academic choices</td>
</tr>
<tr>
<td></td>
<td>Develop applied technical skills and relevant &quot;habits of industry and disciplinary values&quot;</td>
<td>Develop employability and networking skills to enhance employability</td>
</tr>
<tr>
<td></td>
<td>Understand the human (factor) side of engineering through direct experience with labor management</td>
<td>Gain a career head start through networking and direct experience in reputable organizations</td>
</tr>
<tr>
<td><strong>Employer</strong></td>
<td>Produce a steady supply of &quot;better skilled&quot; engineers needing less &quot;after graduation&quot; training</td>
<td>Test drive and access best and brightest students for short and long term work recruitment</td>
</tr>
<tr>
<td></td>
<td>Infuse &quot;new blood&quot; into engineering organizations</td>
<td>Provide feedback to educational institutions re curricular gaps</td>
</tr>
<tr>
<td></td>
<td>Exchange ideas and research with university</td>
<td></td>
</tr>
<tr>
<td><strong>Institution</strong></td>
<td>More prompt elimination of students unable to handle the &quot;double test of academic fitness&quot; - in class and in the workplace</td>
<td>Co-op used as a recruiting tool for top students</td>
</tr>
<tr>
<td></td>
<td>Ability to leave some descriptive technical matters to industry affording more class time to fundamental principles</td>
<td>Provides a proven complementary learning model thereby enhancing learning and retention</td>
</tr>
<tr>
<td></td>
<td>Using modern equipment in industry for educational purposes saved some expense in school shops</td>
<td>Co-op improves graduate employment outcomes</td>
</tr>
<tr>
<td></td>
<td>Fuller use of university plant due to students alternating periods in industry</td>
<td>Co-op can serve as a branding mechanism for an institution e.g. University of Waterloo</td>
</tr>
<tr>
<td></td>
<td>Stimulus for basic research</td>
<td>Serves as excellent community outreach program</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assists in reducing student debt load, reliance on financial aid</td>
</tr>
</tbody>
</table>

*Original goals and purposes taken directly from 1906 co-op syllabus and Park, 1943. Current data compiled from Cates and Jones (1999), and SFU Co-op-Employer and Student Surveys (2000).*

---

The Changing Role of the University

Increasingly universities are being asked to be more accountable to their community stakeholders. To many in government and industry this means
ensuring the supply of knowledgeable and skilled workers to meet the demands of a rapidly changing labour market. For many parents and students as well, higher education has come to symbolize enhanced career opportunities and indeed most students cite the prospect of "getting a better job" as one of the key reasons they choose to attend university. The government's educational agenda is being increasingly linked to its economic agenda, and programs such as co-op take on a new role in this context. It could be argued that the two have always been linked but there is no question that in recent years universities have felt increasing pressure to develop and deliver more "human capital, science and technology" programs (Axelrod et al., 2003). Research funding policies also reflect this impetus with the Social Science and Research Council of Canada offering targeted grants in the areas of "managing global competitiveness", "education and work in changing society", and "challenge and opportunities of a knowledge-based economy" (SSHRC, 1999). This has served to widen the gap between those academics who believe in the virtues of a liberal arts education and "pure" or "basic" research, and those whose interests are more applied. These tensions are not new, they have been with us since Aristotle differentiated the theoretic, from the practical and the productive. However, universities have for many years enjoyed the privilege of a relatively Platonic view of wisdom, unencumbered by such practical accountability. In a climate that now places substantial pressure on institutions to "deliver" in these areas, co-op presents a ready vehicle, particularly with respect to the development of human capital. Co-op programs must be vigilant about how they
are positioned with respect to such agendas that may not be well aligned with their own. Conversely, if co-op programs are in the business of contributing to the economic agenda through the production and delivery of skilled workers, such a climate may afford many opportunities for growth. Once again, co-op programs must be clear about their goals so that appropriate curricular and strategic directions are thoughtfully pursued.

**Globalization**

One of the most significant shifts in the co-op landscape over the last half-century has been the move towards a global economy and society. Increased mobility, new economic alliances, policies, and partnerships, and the explosion of information technology have all led to a world in which we are all more connected as a global community than ever before. Nobel Laureate Joseph Stiglitz, in a 2005 conference address about the value of co-operative education with respect to internationalization, talked about the need to develop good citizens of a global work force, not just good citizens of a national work force. He noted the important role international co-op programs could play as mechanisms for developing such global citizens given that they place the student work force worldwide in positions which have knowledge at their core as a global public good. Such a world did not exist for the pioneering students of co-op and the original curriculum appropriately does not reflect these global perspectives. But it is undeniable that international co-op is one of the fastest growing areas of WIL and one that requires a great deal more work in terms of student preparation. These co-op students need language and cultural orientation
programs, knowledge about the global economy, access to current information regarding world events and advisories, as well as specific tools and knowledge to process and integrate what often become major transformational experiences. Such preparation may require co-op practitioners to partner with other experts on and off campuses to ensure the best curriculum content and delivery. It will also require a clear sense of the desired outcomes for these international programs, especially if they differ in significant ways from domestic co-op program outcomes. The design and delivery of co-op curriculum for international co-op placements is an area that requires significant thought and attention, and one for which no historical precedent exists. These programs have proliferated in the last few years and related curriculum development lags well behind.

**Enhanced Understanding of Teaching and Learning**

Co-op was developed at the height of the progressivist educational movement in the United States. This movement critiqued the classical curriculum of the nineteenth century that was characterized by routinization, memorization, and recitation. John Dewey, along with contemporaries John Rice and Lester Ward sought to reform education for the twentieth century by placing the learner’s experience at the center of the curriculum. They sought collectively to establish a relationship between school and society, democracy and education (Tanner and Tanner, 1980). Dewey’s notion of progressivism insisted that educational experiences be mediated by careful pedagogical guidance. In many ways, Schneider’s co-operative plan reflected many of these progressivist ideals and
may be one of the better applications of the movement, which by and large was
demed relatively unsuccessful. Social reform was also a component of
Dewey’s progressivism, but it was Dewey’s contemporary George Counts who
was one of the first educators to engage in a critical examination of schools.
Although Count’s political curriculum theory, and progressivism in general,
diminished as the 20th century progressed, the notion of curriculum as political
text would re-emerge with critical theorists in the 1970’s. A more detailed review
of critical theory and co-op is undertaken next chapter.

During co-op’s first century, understandings of curriculum and the way in which
we learn have also changed significantly. There has been a shift away from a
transmissive approach to teaching (where the teacher is the expert and the
learner is the more or less passive recipient of information) to a more
transactional approach to learning (where both teacher and learner are active
in the construction of knowledge and meaning). Over this same time a
tremendous body of knowledge has been amassed providing new insights into
the nature of teaching and learning. Several of these learning theories and
models are further detailed in Chapter Five as they usefully inform our
understanding of the nature of the experiential learning in co-op. While each
model is distinct in its focus and view of learning, there are also overlaps with
respect to certain key strategies including the importance of guided reflection,
the role of experience in the construction and re-construction of meaning, and
the value of actively engaging the learner throughout the curricular process.
Contemporary learning theories also remind us of the situated and social nature of learning, and underscore the important role the learning community plays in the process. Knowledge of current perspectives on teaching and learning, especially those models and theories relating to experiential education, must be incorporated into any contemporary co-op curriculum so as to ensure that co-op's pedagogical goals and objectives are supported by the best understandings we have of the learning process. Though none of the specific learning models or curricular frameworks reviewed in this thesis existed at the time the co-op model was originally conceived, they now provide a rich source of ideas and perspectives for new conceptualizations of the co-op curriculum.

Chapter Summary

Co-operative education is often seen as a bridge between academia and industry, an educational model that acknowledges the theory and practice continuum. While learning by doing is rooted in the history of human philosophy and development, the notion of integrating direct experience with academic studies at the post-secondary level was not formalized in the post-secondary system until the Co-operative Plan was born at the University of Cincinnati in 1906. Soon it was replicated in hundreds of institutions of higher education across the U.S., Canada, and the world. Much has changed in the one hundred years since its inception: the economy has moved from the industrial age to the information age greatly changing the nature of the workplace, the co-op model has expanded into non-technical and non-applied areas such as the Arts and
Humanities, co-op has grown in both size and scope at the post-secondary level and has become a global phenomenon. Stakeholder expectations have changed and the employer has been given an expanded role while faculty members have become increasingly disconnected from the model. During this time, much has come to be known about the nature of learning, especially regarding experiential and adult education, and this too should inform contemporary co-op curricula.

Amidst all this change, the co-op model appears to have remained relatively constant. But upon closer review some important shifts have occurred that may threaten co-op's focus on student learning and its position within the academy. Schneider's 1906 syllabus was filled with specific mechanisms to ensure student learning and connection-making while a sample contemporary co-op course syllabus (quite distinct from Schneider's which was part of an existing engineering course) focuses much more on job search tools, skills, and workplace assimilation. There is very little attention paid to helping students integrate theory and practice or better understand and direct their learning. The end goal appears to have shifted from the student-driven outcomes articulated by Schneider to more employer- and program- driven outcomes, often measured by recruitment and placement numbers. During this same time, co-op programs within institutions have become increasingly centralized, physically and operationally removed from the schools and faculties within which they operate. This has been accompanied by a growing disconnect between co-op programs
and academic programs, potentially taking co-op dangerously away from its educational mission.

The ongoing nature of these changes and the speed at which they are occurring compels one to consider a re-conceptualization of the co-op curriculum — one that more truly reflects the current state of knowledge and of the world within which co-op operates. The changes that have “evolved” from the original syllabus of Dean Schneider are disturbing in their nature, appearing to further distance co-op from the academy, rendering it more beholden to its employer stakeholders. These observations imply that significant changes may be order with respect to the co-op preparatory curriculum design and delivery — a full and complete review of what is taught, why it is taught, and to what end, is very much in order after one hundred dynamic years have transpired.

But do all of these changes reflect new issues? Might there be ideas explored by educational theorists throughout history that could inform this curriculum inquiry? While the changes are recent, some of the issues are enduring. Before exploring concepts of curriculum and various inquiry frameworks in Chapters Five and Six, let us first see how educational issues and perspectives that pre-date the birth of co-op might inform this analysis.
While co-operative education represents a relatively contemporary approach to experiential learning, many of the related educational issues have been discussed for hundreds of years. Helping learners develop the knowledge, skills and attributes necessary for their successful contribution to society has been an interest of philosophers of education throughout time. From ancient Greece through to the 21st century, many educational theorists have addressed the notion of learning through, and for, practice. Following is a brief overview of selected philosophies of education as they relate to co-operative education and its curriculum.

Western Educational Philosophers and Experiential Learning

The earliest Western philosophers in ancient Greece were known as *natural* philosophers and they focused on trying to understand the natural world in terms of a few basic constructs or "truths". In the wake of their failure to reason their way to such "truths", the *Sophists* emerged as a reactionary group of philosophers that determined to focus on the teaching of "useful skills", less fixed on determining absolute truths. The Sophists were in fact the first teachers,
working with young Greek boys teaching them the art of argument -- "an especially valuable skill because eventually those boys would, as head of household, have to speak in the public forums that constituted Greek democracy" (Reed and Johnson, 2000, p.5).

In contrast to the Platonic view of education which focused exclusively on the intellectual or intelligible, Aristotle included what he called "practical wisdom" as part of the rational component of the psyche. This marked the beginning of a movement to extend education beyond the realm of the intellect. However, the development of a "well socialized" individual, adept at contributing to society, as promoted by Aristotle was, in Plato's view, a sacrifice of the proper use of the mind to the "lesser good" of practical action. Here we see the emergence of two very different views regarding the purpose of education, "knowledge for knowledge sake" versus "knowledge for practical application". These are two apparently incommensurable perspectives which persist today and are reflected in several of the curricular orientations described in Chapter Six. Should people be educated so as to know the "truths" about our world as we know them, with no specific need to link those truths to application, or should people be taught certain knowledge (as identified by the academic disciplines for example) as well as how to use that knowledge productively in society? To some extent, the model of co-operative education can be seen to sit between these two conflicting views of education. It requires its participants to know a reasonable amount of "truths" (as evidenced by the completion of discipline specific
courses) but also to possess the skills, understandings and abilities necessary to render those truths “useful” in other contexts. Simplistically one could view the role of the academic institution as carrying out the Platonic ideal of imparting knowledge to students, while co-op provides opportunities for developing the more Aristotelian goals of practical wisdom and statesmanship. As Aristotle writes in the Nicomachean Ethic: “the things we have to learn before we can do them, we learn by doing them” (Reed and Johnson, 2000, p.21).

The practical wisdom imparted to young Greek men foreshadowed the need for a theory-practice continuum. Marcus Vitruvius Pollio, an architect, engineer, and city planner for Augustus Caesar, in his treatise on architecture elaborated on this notion of blending the practical and the theoretic:

... (architects must be) equipped with knowledge of many branches of study and varied kinds of learning, for it is by his judgment that all work done by the arts is put to test. This knowledge is the child of practice and theory. Practice is the continuous and regular exercise of employment where manual work is done with any necessary material according to the design of the drawing. Theory, on the other hand, is the ability to demonstrate and explain the production of dexterity on the principles of proportion. It follows, therefore that the architects who have aimed at acquiring manual skill without scholarship have never been able to reach a position of authority to correspond to their pains, while those who relied upon theories and scholarship were obviously hunting the shadow, not the substance. (Morgan, 1914; Park, 1943, p47-48; italics mine)

Marcus Vitruvius was a favourite referent of Herman Schneider. Over the years, Schneider often quoted the ancient who, in his writings, insisted upon the pairing of theory and practice and who for Schneider became “a symbolical figure
representing a balanced union of Greek culture and Roman efficiency” (Park, 1943, p.48). Not until Dewey, in the early 1900’s, does ‘experience’ again take center stage in terms of its critical role in developing knowledgeable practice, but Aristotle’s notion of practical wisdom and Vitruvius’ treatise calling for the union of theory and practice, provide very early introductions to this idea that becomes a recurrent theme, in various forms, throughout the history of Western philosophy.

Rene Descartes, though opposed to the traditional Aristotelian philosophy still dominant in schools of his day, further elaborated on the role of experience in education. Whereas Aristotle grounded cognition in sensation and experience, Descartes placed reason over the senses and saw experience as a critical place for grounding intuition and deduction which he believed to be the foundations of genuine knowledge. In fact, Descartes largely rejected the role of the school in education, believing that “true education must be done by the individual alone, outside of history, outside of tradition, outside of school” (Garber, 1998, p.127). In the co-op context, Descartes’ rejection of the school’s role in education would as surely also apply to the workplace and this calls into question the extent to which Descartes believed learning was an individual activity, de-contextualized in nature, yet readily transferable to new situations – a notion that would be highly disputed by many educational theorists today. Recent research regarding both the social nature of learning and the transfer of learning (Bandura, 1977; Determan and Sternberg, 1993) challenges Descartes’ ideas regarding the
solitary nature of learning but nevertheless his assumptions represent an early example of the rejection of the notion that academy is the main, or only place, valuable learning occurs.

The idea of extending one’s “formal education” beyond the school walls pre-dates the co-op model by several hundred years and underpins many other earlier forms of work integrated learning including mentorship, guild and craft apprenticeships, and professional internships. Some contemporary educational researchers contend that all meaningful learning is situated and can therefore only occur in the full context of where it is ultimately to be applied, usually outside the classroom (Lave and Wenger, 1991; Schön, 1983). Situated learning theory is explored more fully later this chapter but it is instructive to note that it is deeply rooted in very early western educational philosophy and age-old models of professional and practical education.

The notion of praxis however, is a critical component of Descartes’ education as it enables the learner to liberate knowledge from its past, internalize it, and take action for themselves. The individual must “cultivate their intellect” by practicing reasoned thought so as to eventually, with experience, grasp the truth through intuition and deduction” (Garber, 1998, p.129). This theory pre-supposes that wisdom or intuition resides within an individual and through habitual reflection will emerge, and become self-evident. While the assumption that some sort of “internal wisdom” exists in all learners may be challenged, Descartes
nevertheless notes the value of reflective practice, an idea that much later emerges as a central theme in the research on professional and practitioner education (Schön, 1987) and transformative learning (Mezirow, 1991). Descartes also very much rejected the transmission model of education, and believed that knowledge without experience was not knowledge at all. On this he wrote in the *Rules*:

> And even though we have all studied the arguments of Plato and Aristotle, we shall never *become* philosophers if we are unable to make a sound judgment on matters that come up for discussion; in this case what we would seem to have learnt would not be science but history. (In Garber, 1998. p.128, italics mine)

In order for a learner to effectively move from “knower” to “knowledgeable practitioner”, they must have the opportunity to practice, if not re-construct, what they know and can do in authentic environments. This is the very argument many put forward for the inclusion of experiential programs such as co-op in the contemporary post-secondary curriculum. The premise is that there is often a wide gap between knowing something, or about something, and being able to actually understand, interpret and translate that knowledge into practice. Co-op practitioners and employers (and eventually students themselves) know that an A+ accounting student does not necessarily make an A+ accountant. Gaining personal experience in a co-op workplace provides the context Descartes notes as a pre-requisite for discovering new truths through the interplay between theory and practice.
In today's workplaces, students rarely learn through direct transmission but rather through a process of discovery, trial and error, observation and dialogue with peers and supervisors, as well as through increasing engagement with a community of practice (Johnston, 1996). Many co-op students find themselves in work contexts that are new to them, where little if any of their recently acquired "school" knowledge appears applicable. They often experience new phenomena, without any theoretical or experiential framework within which to interpret these new experiences. In contrast to the "lock step" views on learning presented by Descartes and Aristotle, co-op learning does not necessarily follow an orderly pattern. Co-op learners have talked about their learning as emerging from phenomena observed and having to work backwards to uncover the underlying causes. They sometimes start at the end point that has been given in the workplace and discover the "building blocks" that support that end point through reflection and deliberation on the experience and their theoretical knowledge. Similarly it is not always the case that problems in the workplace are clearly defined and presented in the orderly manner that they might be in school, rather they often need to be discovered and defined amidst the chaos before any solutions can be considered. Even solutions to the "messy problems" of business described by Schön (1983) do not always occur in a lock step order, though they may have been presented in such an order in theory. The nature of co-op work term learning is much more organic and iterative.
Central to learning in this way is the idea of making the connections between known ideas and those to come. John Locke, while critical of the concept of innate truths, was one of the earliest Western philosophers to suggest that new truths are learned through connections to knowledge already possessed by the learner. While his ideas pre-date the notion of metacognition, they nevertheless link new learning with past learning. Although a strong advocate of a set order for learning in the curriculum, Locke’s demonstration of the conceptual relation of ideas may prompt co-op curriculum developers to explore better ways to help students “make connections” between apparently new ideas and problems in the work context and what they already know from the different context of school or other environments. This “connection-making” is central to the current research on transfer of learning that strongly promotes metacognition as a critical tool for enhancing skills transfer. Through reflective techniques learners begin to think about their own thinking and are better able to “see” the shared general principles underlying apparently very different problems. With this reflective insight, two apparently different problems begin to share some underlying similarities. This prompts the learner to access and apply strategies and knowledge used in a previous experience to the new context.

While the theoretical and philosophical writings regarding co-operative education remain scant, those that can be found almost always cite the work of American educational theorist and philosopher, John Dewey. Dewey’s clear statements regarding the “intimate and necessary relation between the
processes of actual experience and education" (Dewey, 1938, p.7) are often referenced and looked to as providing "a philosophical foundation from which a pedagogical model (for co-operative education) can be developed" (Heineman et al., 1992, p.18). Heineman et al. sought to address the absence of any explicit educational philosophy for co-op by proposing Dewey’s educational pragmatism, and in particular his notion of “anthropological epistemology”, as a strong educational rationale for work integrated learning models such as co-op. The notion that people learn what they need in order to succeed in society is at the heart of Dewey’s anthropological perspectives and certainly aspects of co-operative education resonate strongly with these sentiments. Dewey noted that most post-secondary students in the early 20th century (and current recruitment data suggests this remains true today) were motivated by the idea that higher education would help them “secure a livelihood and obtain success in a career” (Dewey, J., 1949, p.181).

Like Descartes before him, Dewey elaborates on the notion of helping learners build connections between current knowledge and new knowledge, suggesting it as a “fundamental principle in the development of a theory of experience” (Reed and Johnson, 2000, p.105). He introduces a “category of continuity”, or an “experiential continuum”, which proposes that every experience both takes up something from previous experiences and affects the quality of those that come after it. Dewey presents this principle as a way of discriminating between experiences that are educationally worthwhile and those that are not. He talks
about the difference between experiences that lead to growth versus those that do not, and the importance of understanding the role of the environmental factors and how they interact with the individual to form the overall experience or as Dewey calls it, “situation”. In contrast to more traditional education carried out in classrooms and laboratories, where objective conditions can be relatively controlled, Dewey calls on experiential educators to “become intimately acquainted with the conditions of the local community, physical, historical, economic, occupational, etc., in order to utilize them as educational resources” (Reed and Johnson, 2000, p. 109). This foreshadows the cultural approach to curriculum studies advocated nearly a century later by Joseph, Bravmann, Windschitl, Mikel, and Green (2000) and discussed further in Chapter Six. Although co-operative education practitioners are often aware of many of these environmental conditions in co-op workplaces, little is formally done by way of the curriculum to examine ways in which this cultural knowledge can purposefully be utilized as educational resources.

As noted earlier, chief among Dewey’s criticisms of traditional education is the de-contextualized nature of the learning and the subsequent difficulties learners have in transferring that learning to a new situation. In some cases, Dewey notes, the learner seems to need to re-learn or even un-learn skills from school in order to make progress in the workplace. The frequently observed phenomenon of successful students being unable to mobilize their skills and knowledge to their advantage beyond the school environment points to a gap in
the contemporary curriculum as well. Students need to be able to see what they have learned as an example of the general kinds of problems they might encounter in other situations as well as see how the solutions they suggest in school papers and on exams might also apply in new contexts. Dewey and another important contemporary educational theorist, Paulo Freire both believe strongly in a project- or problem-driven approach to learning for its ability to fully engage the learner with their world, and in so doing transform them both. Problems, they contend, create a purpose and motivation within the learner and allow for building upon what one may already know, in new ways. Problems require the learner to actively participate in their learning thereby changing the typical power structure inherent in a transmission or banking model of education.

Originating within a Deweyan framework, the notion of constructivism emerged in the latter half of the 20th century. This is a philosophy of education that argues for the educational value of experience and the goal of responsible membership in the democratic community, and promotes:

- education as preparation for, as well as an extension of, life
- solving real problems as core to learning
- more active roles for both the teacher and student as co-learners in the process
- the needs and interests of the student as forming part of the curricular considerations

Given these tenets, it would appear that co-operative education was grounded in a constructivist philosophy, even though it pre-dated constructivism by several
decades. In a constructivist world, knowledge is constructed and re-constructed by learners as a result of interacting with people and problems. This presupposes that learning is not purely cognitive but also involves the social and affective dimensions. Piaget describes a particular "version" of constructivism, known as cognitive constructivism, that supports the idea of providing learners with opportunities for experience in the real world combined with the development of metacognition. Within this philosophy, building the "correct" knowledge is not so much the educational task as is learning the capacity and skill of building cognitive schemata. In this paradigm the learner is self-regulated and responsible for ensuring his or her own motivation for working on a curricular task. Here the teacher (in co-op this could be a peer, an employer, a co-ordinator, faculty member, colleague, etc.) is more of a guide and facilitator, helping the student along their journey to uncover centrally defined curricular objectives, at their own pace. Another form of constructivism that may help describe, and ultimately support, co-op learning is social constructivism. This perspective posits that knowledge is a social construction on two levels: that of the person (ontogenesis) and that of the social group (sociogenesis). In this view, the social group determines what is a "valid interpretation of the world" since no compulsory understanding of that world exists. This opposes the Piagetian notion, which underlies the cognitive constructivist approach, that there is set knowledge which can and will be learned at different stages, and "experience" simply helps the learner come to the right conclusion sooner and more completely. Common to both the above forms of constructivism however is
the placement of learners in real-life contexts, rich with information and ambiguity where meaning is negotiated through interactions with problems and other people in the learning environment. Here, as in many of the philosophies noted above, learner reflexivity is essential and must be nurtured. The co-op model provides an ideal context for constructivist approaches to learning. It presents multiple exposures to the messy problems of the workplace and protracted opportunities for interacting with many different "others" to address these problems. It also provides many opportunities for reflection in and on practice in both the workplace and back at school. The extent to which the co-op curriculum supports these opportunities is further examined in Chapter Seven.

These historical perspectives regarding experiential learning remind us that the tension between theory and practice has deep roots and often reflect very different world-views regarding the goals and purpose of education. But rather than impeding the development of theories of learning, it has instead served as a force for the exploration of new perspectives and ideas of how the two might interact. History reminds us that indeed valuable learning has been occurring outside the academy forever but that learners need help making the connections between their various learning environments. And though conceptualizations of learning have changed over the centuries, certain features have endured including the critical role of reflection and metacognition, the value of both theory and practice, the motivation afforded by working with real problems and projects, and the importance of all aspects of the learning environment. This
historical review provides co-op curriculum analysts and developers with a solid foundation of learning related theories and practices upon which to situate the more contemporary conceptions of learning and curriculum presented next.

Conceptions of Learning and Co-op

While the workplace curriculum is not the focus of this inquiry, it is the focus of the preparatory curriculum that, as its name implies, is intended to prepare and support students in their co-op work searches and job placements. Workplace learning therefore needs to be understood so that it may be appropriately supported in the preparatory curriculum. Given the important and changing roles the learner will need to play in their own learning as they transition between school and work, and the variety of "teachers" participating in the co-op model, an understanding of co-op learning is critical for all co-op stakeholders. Several models and theories regarding experiential learning have been used to explain and inform co-op workplace learning. Those most often used to describe co-op learning are briefly outlined next.

Cognitive Development

Piaget's theory focuses on the development of logic and reasoning at various stages of growth from infancy through to adulthood. He proposes three fundamental processes in the development of logical thinking: 1. Assimilation: integrating external elements into the learner's internal structures; 2. Accommodation: changes in the learner's internal cognitive structures and
transformations in thinking; and 3. Equilibrium: those processes that maintain cognitive organization for the learner while they are experiencing cognitive transformations. For co-op students, note Cates and Jones (1999), all three processes are naturally in effect but it is perhaps "the area of equilibrium that is most significantly affected" (p.18). They propose that because co-op students must simultaneously develop logical reasoning strategies for the classroom and the workplace, they maintain the organization of their cognitive structure more easily than non-co-op students who do each separately. The easier and more effective transitions from school to work experienced by co-op students (versus their non-co-op counterparts) may also be explained using this theory.

Social Learning
Bandura’s theory is based on the premise that humans imitate behaviour and, if that behaviour is reinforced, will learn to repeat it in context. In addition, he proposes that modeled behaviour has the primary function of transmitting information to the observer. The impact of the modeled behaviour is key – negative or positive consequences, either experienced directly by the learner or vicariously through observing the consequences of the modeled behaviour, will determine what is learned. This learning through observing the success and failures of colleagues or supervisors has been identified in the co-op research as a key way in which co-op students learn on-the-job (Johnston, 1996; Johnston, Angerilli, Gajdamaschko, 2003). Social learning theory reinforces the important roles of peers and supervisors in both the workplace and academy as they serve as mentors and role models for developing students. It also points to
the value of sharing stories of both success and failure with students, since this theory proposes that learning can occur both directly and through the experiences of others. In the context of this theory, particular co-op practices such as student group de-briefings, student blogs, and student, employer and staff discussions forums, etc. may become important components of a contemporary co-op curriculum.

**Experiential Learning Model**

Probably more than any other, Kolb's (1984) experiential learning model has been used to describe the cycle of co-op workplace learning. He describes a four-stage model that the learner continuously moves through, in an iterative manner. Typically a learner starts with a *concrete experience*, followed by formulating a set of *observations and reflections* about that experience, after which the learner begins to *form abstract generalizations* which they later *test in new situations* (which would then create a new set of *concrete experiences* and so on). In this model the learner is governed by their own goals and motivation to pursue those goals. The cycle is therefore most efficient and effective when learner goals and motivation are clear and high. Cates and Jones (1999) suggest that co-op students have many concrete experiences on their work terms that they will reflect upon both on the job and back at school. Based upon these reflections they will formulate abstract concepts and generalizations that they will test in subsequent co-op experiences. Kolb’s model underscores the importance of embedding opportunities for reflection and the creation of abstract generalizations in the co-op curriculum.
Reflective Practice

Donald Schön's (1983) model of reflective practice shares some of the features of Kolb's in that the learner engages iteratively with the problem situation often resulting in the re-framing of their original conception of the problem, and changes in subsequent strategies and actions. Schön conceives of this as "reflection in action" and talks about learners engaging in "reflective conversations" with the practice situation. For Schön, the notion of a linear, or lock step, approach to the learning of professional practice is replaced by a much more responsive and fluid model. Reflection in and on practice is influenced by continuous feedback loops as well as by the learner's prior knowledge, experience, and conceptual frameworks. Most problems of practice do not present themselves as "givens" (as they might in school) and therefore often do not respond to the application of scientific principles or solution templates. Schön talks about the art of professional practice -- an ensemble of problem framing, on-the-spot experimenting, detecting consequences and implications, and responding to the backtalk that constitutes the learning of professional practice. While learnable or coachable, Schön does not believe the process itself is teachable. He believes it must be experienced and played with by the practitioner. For Schön, the knowledge is inherent in the action, based in part on what the learner brings to the situation and in part on how they interact with the situation. Certainly co-op work terms present students with many opportunities for problem detection and ongoing reflective conversations, and the possibility for creating theories of action from those conversations. Schön's "knowledge-in-action" theory challenges the school of thought (technical
rationality) underlying most teaching and learning in higher education. A student that participates in co-op therefore adds a complementary model of learning to their overall education and in so doing is exposed to different ways of knowing that need to be acknowledged and supported in both the co-op preparatory and workplace curricula.

**Situated Learning**

Lave and Wenger's (1991) notion of situated learning is based upon the premise that the learner and their learning cannot be separated from the world in which the learning occurs. They believe knowledge always undergoes construction and transformation *in use*, and ultimately knowledge itself is a cultural and social product. This view challenges the notion that learning occurs in one place and is then simply applied in another. This theory also challenges the way co-op has often been described: as an opportunity to put theory learned in school into practice in the real world. This very simplistic definition of co-op, used by many practitioners themselves, is insufficient to describe the tremendous amount of new learning and the "aha!" moments many students enjoy as they construct and re-construct new understandings through their engagement in various workplace communities.

Lave and Wenger believe that learning occurs within a community of practice -- a collection of individuals sharing mutually defined practices, beliefs and understandings over a period of time, toward a shared enterprise. They propose a theory of *legitimate peripheral participation* where students or newcomers
slowly move toward complete participation in a community as they progressively master the required skills and knowledge of that community. This notion of moving closer and closer to the center of a community of practice is an interesting way of envisioning what may be occurring with co-op students as they enter and assimilate into each new workplace. Through engagement in meaningful practice, co-op students develop more of the relevant skills and knowledge and slowly become more central to that community or workplace. Learning is far more than the observation and imitation sequence posited in Bandura's social learning model. It is a result of the learner absorbing, and being absorbed into, the culture of practice. Situated learning might prove to be a useful framework for studying differences in the learning potential of a given practicum as it relates to the issue of paid versus unpaid work terms. It could be hypothesized that co-op students, because they are being paid, may be given more substantial work assignments (more complex, more integral the workplace culture, more inter-dependent) than unpaid practicum students (in internships or service learning placements). Because of this their opportunities for skill and knowledge development are greater, their opportunities for engagement versus observation and imitation may also be increased, and therefore their ability to move closer to the core of the community of practice is also enhanced. Situated learning theory underscores the social nature of learning and reminds curriculum developers of the important role others in the learning community play in the learning experience.
**Epistemological Appropriation**

Hung's theory of epistemological appropriation was developed to help better understand the nature of the situated learning described by Lave and Wenger as it relates specifically to secondary school co-op. In this framework, Hung (1999) suggests that newcomers become part of a community of practice through a series of sequentially acquired (or appropriated) self-regulatory experiences. They first *submit to the authority* of the experienced practitioner, then *mirror that practitioner*, followed by the *construction of an independent pattern of actions and beliefs* inherent in that community (Chin, Steiner, Bell, Munby, and Hutchinson, 2004). The shifts in the novice's thinking occur as a result of a mentor type relationship with the experienced "teacher" who is involved in a parallel process of coaching, scaffolding, and modeling. In this model, the self-regulatory processes of both the learner and teacher are the focus. Chin et al (2004) used Hung's theory to examine the learning of a high school co-op student on a practicum in a dental office. They found support for Hung's sequence of epistemological appropriation (from submitting to mirroring to constructing) in both the co-op student's and supervisor's activities over time. Hung's framework may help interested practitioners better understand the nature of co-op workplace learning and construct activities and tools for both students and employers that could help mediate the appropriation process and optimize the learning potential of the co-op work term.
Authentic Learning and Co-op

Co-op is a model that focuses not only on knowledge acquisition but also on the performance of competencies that demonstrate that the learner can put their acquired knowledge into practice. It does so by placing students in authentic learning situations (workplaces) which originate with the interests of the students (they apply to the co-op positions of interest to them) and which are influenced by the student's goals, opportunities and the situational context. Authentic learning activities ensure that students are actively involved in tasks that present opportunities to acquire and apply new information and skills in context. By definition, authentic learning means learning that uses real world problems and allows students to explore and discuss these in ways that are relevant to them (Bransford, D., Brown, A., and Cocking, R. 1999). By that definition, co-operative education is an entirely authentic learning model. Embracing a constructivist philosophy, authentic learning (and co-op) is learner centered, requires the active participation of the learner, and ensures that learners work on tasks that have real world qualities and which are meaningful to them. The literature on authentic learning is closely linked to an even larger body of work on authentic assessment. Also known as alternate or performance assessment, authentic assessment uses tools and techniques that differ greatly from traditional testing in order to measure skills and knowledge that students are able to demonstrate when completing specific tasks in context. These include self-assessments, expert assessments, portfolios, and rubrics. One of the most valuable contributions that the authentic learning literature can offer co-op is an approach to assessment and a variety of tools that better correspond to the
nature of co-op learning and its goals. Currently co-op uses some authentic type assessment tools (e.g. employer evaluations) but also some very traditional assessment techniques (e.g. work reports) as significant “measures” of the learning value of the work term. When the assessment tools are not specifically designed to measure the type of learning they are being used to measure (e.g. traditional tools used to measure non-traditional learning), the resultant information may be incomplete or invalid. In theory educational practices should align with educational purposes and assessment. With the co-op model having been developed prior to these notions of alternative learning and assessment, and with relatively little attention having been paid to reviewing and updating specific curricular elements in co-op, it is not surprising that there may be some incongruities within the co-op curriculum. The extent to which more authentic assessment tools might be used as part of the co-op curriculum has not yet been explored in the literature but holds some promise given the general lack of pedagogical tools and processes for authentic environments.

**Transformative Learning**

While not often cited in the literature with respect to co-op learning, Mezirow’s (1991) groundbreaking work on transformational learning speaks directly to a tremendous potential within the co-op model. He describes transformative learning as “a process in which we become critically reflective of our own assumptions, arrive at an insight, and justify our new perspective through discourse” (Mezirow, 1991, p.190). This process is intended to help adults break through socially constructed learning boundaries and become better able to gain
new perspectives through understanding how their old ones were formed. In this model Mezirow presents an original and comprehensive theory of how adults learn by making meaning of their experiences. He shows educators how to facilitate the generic processes underlying transformative learning by encouraging learners to look for similarities and differences between present and prior learning, to form generalizable principles between different experiences that share common elements, and to seek ways to express concepts and create metaphors that enrich and help mobilize their learning. Mezirow’s Transformative Learning theory encourages learners to engage in personal and social change by removing themselves from previously held assumptions and belief systems thus enabling them to challenge and re-think meaning with minimal external interference. As co-op requires the learner to frequently move across multiple cultures (between school and work and across various workplaces), it provides many opportunities for the transformational thinking of which Mezirow speaks. However, the goal of a truly transformational curriculum is quite powerful with respect to change. Transformational experiences require the learner to question whether the world they see is the world they want, how and why has it been constructed in such a way, and how they can act as a social agent in order to remedy any social injustices. This requires a process whereby the learner becomes critically reflective of his or her own beliefs and engages in discourse that may result in a significant change in their views (Mezirow, 1991). So while the co-op model may offer many opportunities for such reflection, most co-op curricula do not encourage or
support transformative learning of this nature, either at the personal or societal level.

The focus of most co-op programs remains on the employability skills deemed of value to the “marketplace” and on ensuring that students develop these to the greatest extent possible in order to fulfill market needs. In a sense this turns the selection and determination of the curriculum content over to employers. Co-op programs could rightly be criticized for subordinating the interests of the learners to the interests of employers by placing “the determination of what constitutes ‘useful’ knowledge for working people” (Brown, 2000, p.4) with the stakeholder that has the power to hire. This is not of little consequence. As an educational program in the post-secondary milieu, co-op must ask itself what responsibilities it has with respect to fostering personal and social awareness and transformation. Yet, due to co-op’s partnerships with governments, not-for-profits, and business and industry, it needs to be equally mindful of how supporting such social critique might affect those relationships. Co-op is in the paradoxical situation of being well positioned to promote thinking and change across various communities and with various stakeholders, while knowing that in doing so, it risks losing the very position that affords that privilege. This delicate position underscores both co-op’s powerful potential as a change agent and the balance of power held by the employers. A critical look at some of these power dynamics follows next.
Critical Theory and Co-op

Perhaps the greatest potential of the transformational learning proposed by Mezirow is its ability to change the world through critical reflection that moves the learner to action. Dewey noted that one of the great failures of traditional education was the exclusion of the "powers and purposes of those being taught" (Reed and Johnson, 2000, p.112). This connection between "purpose and power" is central to the interests of 21st century educational critical theorists such as Freire, Kincheloe, Apple and Giroux. These critical theorists do not so much propose sets of laws for curriculum (as one might expect from more traditional theorists) but rather present lenses through which to view information and the world in which it, and we, are situated. Henry Giroux (1988) argues that critical theory "allows teachers to see what they are seeing" (p.47), assisting both teachers and learners in formulating questions about the world and providing conceptual tools to help understand and change the social injustices therein.

This theoretical tradition finds its roots in the Frankfurt School of Social Research in the 1920's where critical theorists in post-World War I Germany focused on issues of power and domination within an industrialized, modernist age. Critical theorists are "especially concerned with how domination takes place, the way human relations are shaped in the workplace, the school, and everyday life" (Kincheloe, 1999, p.197). The goal is to raise individual consciousness about the self as a social being and, once raised, inspire the
individual to see how their beliefs, opinions, self-image, treatment of others, etc. are influenced by, and influence, the learning context. This self-reflection is meant to result in changed perspectives and perhaps even changed behaviour within the individual. Although no set of specific strategies is provided (this would be too positivist of an approach for critical theorists), a "framework of principles" is posited around which potential actions may be discussed and reviewed. Critical theorists seek to transform people and systems through education, and view it as a dynamic and powerful force for change.

*Critical pedagogy* is what emerges when critical theory encounters education (Kincheloe, 1999). Critical pedagogy "builds upon Deweyan progressivism, challenging comfortable assumptions about work and work training" (Kincheloe, 1999, p.198). Egalitarianism and social democracy are key goals of critical theorists and much critical pedagogy serves to expose the subtle and often hidden educational and workplace processes that privilege the already privileged. In this light, the idea that co-operative education simply promotes a politically neutral set of skills, knowledge, and attitudes that moves students towards egalitarian socio-economic mobility is naïve. Critical theorists seek to promote the individual's consciousness of self as a social being -- they want student workers to be able to analyze alternatives and make ethical choices around their work and careers. They want individuals to begin to understand what forces shape their world and their perspectives of that world. In contemporary western society "that world" has become increasingly consumer
oriented. The ethic of *neoliberalism* has been described as an attempt to subordinate all human needs to the dictates of the market or the "bottom line", while at the same time eschewing public service and the public good. Apple, (1999) sees neoliberals as the "most powerful element within the conservative restoration" currently underway in the U.S. (p.203). He believes that neoliberals are guided by a weak state and therefore all that is public (which would include most Canadian post-secondary institutions) is bad and all that is private, such as business and industry, is good. Neoliberal values of efficiency, productivity, return on investment, and cost/benefit analyses dominate the post-modern world, and have become the metrics by which success is measured not only in business but increasingly in the public sector, including education.

Apple, Giroux, and others believe that the ethics of neo-liberalism lead people to act only in ways that are good for themselves -- essentially turning the world into a vast consumer marketplace. In the face of such a scenario, social democratic ideals around issues of justice, race, gender, equity are at great risk of not only being marginalized, but even discarded, as the cost/benefit analysis of addressing those ideals may not be favourable for those currently enjoying the power. In this case, a "relative handful of private interests control as much as possible of social life in order to maximize their personal profit" (Robert W. Chesney in Giroux, 2003, p.153).
In neo-liberal policy, "[s]chools are to be driven by private needs. Education is to be a private good and is to incorporate the skills, knowledge and values necessary to perform in a manner that enhances the competitiveness of the private sector" (Apple, 1999, p.210). While clearly this presents a troublesome prospect for some public educators, how disturbing is it for practitioners and curriculum developers of co-operative education? Doesn't the preparation of co-op students do precisely that? Isn't co-op designed to ensure that students are provided with the skills, knowledge, and values necessary to perform in the manner that enhances the employer's "bottom line"? If this is the case for co-op education, should it remain so? Surely a program such as co-op, one that proclaims itself as promoting student learning and as playing a key role in the development of engaged citizens, needs to support such development and transformation through its curriculum and practices. Is a "successful" co-op student singularly defined as one that is readily employable and "fits" well into existing employment structures? If not, in what ways does co-op support and evaluate the development of more critically engaged worker-citizens?

According to Simon, Dippo, and Schenke, (1991), programs such as co-op, which place students in work situations, create occasion(s) in which students necessarily confront ideas, terms, procedures, relations, and feelings in order to make sense of their presence in the workplace. How students do this – how they accomplish experience – depends in part on the beliefs, ideas, assumptions, and values they bring with them, but also on the context and content of reflection and analysis that we may be able to provide in work education programs. (p.10)
Critical theorists' quest for social justice and societal betterment through institutional change must invariably involve the workplace, though the challenges to the power structures therein will be among the greatest to be faced. In the area of work integrated learning, Brown (2000) begins to conceptualize a critical post-modern curriculum and sets out to "devise an approach to curriculum that would organize and facilitate a means by which workers/learners could begin to analyze, understand, and critique existing power relations and to formulate alternative visions", while remaining part of the system (Brown, 2000, p.13). He noted that this would necessitate concurrent efforts by all stakeholders to recognize, evaluate and implement the changes needed for any such transformation to occur, Co-op employers represent a broad range of societal interests from large global multi-nationals, to small and medium sized businesses, through to the public sector and very small not-for-profit social agencies. Co-op cannot, and should not, control the employer environment. There is great richness in the diverse experiences and perspectives to which students may be exposed. However, in the absence of self-awareness, self-reflection, or any critical tools specifically aimed at helping students better question and understand these environments, the full richness of the experiences may also remain unrealized.

**Chapter Summary**

Since the ancients, the role of experience has been seen as an important component of human learning. Though critical to learning, there has been, and
persists, a distinction between the development of the intellect as promoted by Plato and the more pragmatic Aristotelian development of "practical wisdom". Early in the twentieth century, progressivist educators such as Dewey, sought a new model of education that eliminated the "separation of the ideas of the world from the ideas of the classroom" in order to develop a fully educative experience. Dewey's work set the stage later that century for constructivist theorists whose philosophy of learning more fully engages the learner in the construction and re-construction of their knowledge. Deweys' work also shaped the thinking of several more contemporary educational theorists such as Kolb (1984), Shôn (1987), and Mezirow (1990), each of whom move beyond a purely behavioural definition of learning to suggest instead that meaning – which may be difficult to observe and measure – plays a central role in that learning (Marsick and Watkins, 1990). Each of these theorists support a more constructivist orientation to learning, one that underscores the important role of reflection in and on practice as well as to the learners' ability to mobilize what they know and can do from one context to another.

New learning and assessment tools have been proposed to assist and monitor learning in these more authentic environments. And most current theorists concur that high levels of learner engagement with real life problems and facilitated reflection in and on the solution finding process leads to more fully educative experiences that have the power to transform. Not simply transform
the individual learner but also, as critical theorists Freire, Giroux and Apple would hope, transform the world.

Co-operative education curriculum developers need to seriously consider all the expected outcomes and potentiality of the co-operative model for each of the co-op stakeholder groups and clearly state the primary purposes of contemporary co-op programs. The co-op curriculum then needs to be more clearly defined and its content, delivery and assessment clearly aligned with those stated purposes. To do so, a closer look at what is meant by the co-op curriculum, how it differs from a traditional course curriculum, and a clearer statement regarding the purpose and goals of contemporary co-op is required. The next chapter explores such as re-conceptualization.
CHAPTER FIVE: CONCEPTIONS OF CURRICULUM AND CO-OP

Defining, Developing and Understanding Curriculum

For most educators the purpose of curriculum is to help students achieve a set of learning outcomes defined by a particular program or course. Definitions of curriculum range from a "very specific course of study as at a school or university" (Oxford English Dictionary) through to "everything that occurs under the auspices of the school" (Oliva, 1982). The Tanner and Tanner (1980) definition is perhaps the best with respect to describing the purposes of the co-op curriculum. They define curriculum as "the re-construction of knowledge and experience systematically developed under the auspices of the school to enable the learner to increase his or her control of their knowledge and experience", and aimed at the learner's "continuous and wilful growth in person-social competence" (pp.38). It honours the role of both knowledge and experience in the construction and re-construction of meaning, the notion of managing and directing one's learning, and the idea that learning can result in both personal and social growth. Though others, such as Dewey (1902), have noted the need to "get rid of the prejudicial notion that some kind of gap exists between the child's experience and the course of study", the Tanner definition explicitly acknowledges the joint roles of experience and formal studies. It also refers to
the learner gaining increasing control over their knowledge and experience, and alludes to their ability to acquire and mobilize knowledge in new and different contexts toward both a personal and public good. As previously noted, self-direction and transfer of learning are central to learning in a model such as co-op that relies on the learner recognizing and taking advantage of the learning opportunities they encounter as they alternate multiple periods of study and work in many different environments. Miller and Seller (1990) extend the Tanner and Tanner (1980) knowledge and experience-based definition of curriculum to include ideas regarding roles and norms that underlie the interactions that occur in the places where the curriculum is played out. They see curriculum as "an explicitly and implicitly intentional set of interactions designed to facilitate learning and development and to impose meaning on experience" (pp.3-4). Such a definition begins to raise questions, among critical theorists in particular, regarding "whose meaning" is imposed and for what purpose. The 1988 definition of curriculum proposed by Connelly and Clandinin offers the broadest view of all as they propose curriculum as "one's life course of action" --- a person's collective knowledge and experience. While this inclusive and liberating notion of curriculum is a useful one, especially when considering the nature of the curriculum that emerges during co-op work experiences, for this inquiry the Miller and Seller (1990) extended version of the Tanner and Tanner (1980) definition will serve to define what is generally being referred to as curriculum.
Historically the curriculum research focus has been on development through investigation of the objectives, design, implementation and evaluation processes related to curriculum. Researchers such as Miller and Seller (1990), and Eisner (1985), extended this procedural approach to curriculum studies somewhat by introducing the notion of curricular orientations (world views or models of reality that underlie particular purposes, and therefore methodologies, of education) and contemplating the historical and contemporary forces affecting curriculum. These theoretical positions introduce the possibility for discussions that begin to move the field somewhat away from its exclusive interest in design and implementation towards a greater emphasis on understandings of curriculum. In 1969, Joseph Schwab radically repositioned curriculum studies stating "the field of curriculum is moribund" due to its "inveterate, unexamined, and mistaken reliance on theory." He believed a rebirth of the field was possible, but only if attention shifted to a greater integration of curriculum theory and practice. Contemporary researchers have also begun to question some of the underlying assumptions about the cultures within which, and for which, the early curricular paradigms, epitomized by the Tyler Rationale (1949), were designed. Interest has shifted more towards understanding curriculum and, according to Pinar et al. (1995), the field itself has come to be known as the "curriculum" field versus the "curriculum development" field. Pinar (1995) proposed that this shift would change "the definition from curriculum as exclusively school materials to curriculum as symbolic representation" (pp.16). However, his contention that curriculum development is dead may be premature, with researchers such as
Beyer and Apple (1998), some three years later, lamenting a continued focus within the field on “technique” over substance. They are concerned that “the difficult ethical and political questions of content, of what knowledge is of most worth, have been pushed to the background in our continued attempts to define technically oriented methods that will solve our problems for once and for all” (pp.3).

The re-conceptualization or re-birth of the curriculum field called for by Apple, Pinar and others, whether complete or still in progress, has nevertheless inspired more recent researchers such as Joseph, Bravmann, Windschitl, Mikel, and Green (2000) to propose the idea of “cultures of curriculum”. These cultures refer to “enveloping patterns of norms, endeavors, and values” that guide the purposes and practices of education. The authors seek to encourage and enable educators to become more aware of the possibilities for curriculum by expanding the ways in which they view and understand it. Influenced by Bruner's (1996) *The Culture of Education*, which explores the influence of the “inarticulate cultural values as well as explicit plans” that underlie educational efforts, Joseph et al. (2000) re-conceptualize curriculum as:

... not just an object (content), but as a series of interwoven dynamics. Curriculum conceptualized as culture educates us to pay attention to belief systems, values, behaviors, language, artistic expression, the environment in which the education takes place, power relationships, and most importantly, the norms that affect our sense about what is right or appropriate. (Joseph et al., 2000 pp.19)
This perspective introduces a situated and moral dimension to curriculum and requires openness on the part of curriculum developers and deliverers to critical inquiry at the deepest levels. Joseph et al. (2000) present a framework that explicitly seeks to reveal the beliefs, assumptions, implications, and implicit social and political visions of a given curriculum. In so doing, they begin to acknowledge and confront the dominant order that has so heavily influenced curricular development and implementation to date.

The curriculum field may, as Jackson (1992) points out, be in somewhat of a state of confusion, perhaps reflective of the two very different orientations towards its study: the more narrowly focused interest in issues regarding the curriculum development process and the more broadly focused interest in fostering understanding through critical inquiry. For this thesis, both perspectives are considered. Procedural aspects of curriculum studies such as orientations, objectives, content, and assessment will be examined but because this is an inquiry into an educational model that moves between multiple learning environments, particular emphasis will be placed on exploring the cultural aspects of curriculum. Finally this inquiry will explore the co-op curriculum through a critical lens to investigate the hidden and null curricula that may inhabit it and to question its political and social justice dimensions.
Defining the Co-op Curriculum

Given the premise that curriculum is intended to help the learner make meaning of their knowledge and experiences, co-operative education could be expected to have multiple curricula, reflecting the various formal and informal educational components that comprise it. My review of the co-op research literature revealed that there is no shared definition of curriculum for co-operative education. Recent research references to “the co-op curriculum” (Cedercreutz and Cates, 2006; Maltbie, Matulis, and Cates, 2006) refer to the academic courses that are required for a particular co-op major. In their 2006 publication “Using Statistical Analysis of Co-op Student Work Term Performance in the Assessment of Co-operative Education Curricula”, Cedercreutz and Cates use aggregated data from employer assessments (of students) to inform curriculum direction for each of the participating co-op disciplines (engineering, architecture, and business administration) at the University of Cincinnati. In this study, co-op students’ on-the-job skill development is seen as a function of the academic curriculum. Aggregate work performance evaluations for co-op students in each discipline served as a mechanism to provide feedback to the University faculties by linking the students’ job performance to their course of studies. In this research, the “co-op curriculum” refers to the academic courses required for co-op students in a given major. The premise is that if accounting students on their work terms perform consistently poorly on a particular performance indicator such as “working on a multi-disciplinary team” or “idea generation”, this feedback is
provided to curriculum reform committees at the institution with the intention of shaping the academic course reform. In this study, the performance measures are taken from the co-op work evaluations completed by employers and determined as significant by a Means and Standard Deviation Index applied to the aggregate data. The underlying assumption is that these performance outcomes are the same as, or at least congruent with, the academic curriculum learning outcomes and therefore the two (job performance and academic curriculum) should be closely aligned. It is unclear the extent to which these two are aligned in most co-op institutions, but unlike the integrated syllabus produced by Schneider, the majority of contemporary co-op programs have quite separate and distinct co-op and academic curricula. This definition of co-op curriculum refers to the academic courses and presumes a very close link between workplace and academic learning objectives.

A different definition of the co-op curriculum is referenced to in the works of Heinemann et al. (1992), Eames and Coll (2006), and Cates and LeMaster (2003) among others. These researchers examine ways in which the institution can better prepare and support student learning through co-op and the curriculum. They call for various ways of better connecting the theory and practice, propose enriched learning assignments while on work terms that engage students in active inquiry, and suggest embedding socio-cultural views of learning in the design of pre-co-op curricula. This definition of curriculum refers to the knowledge and skills imparted to students in preparation for their
work experience as well as pedagogical activities students are required to engage in during and after each placement. This version of co-op curriculum refers to the courses and workshops taken by co-op students in preparation for their work terms, and is generally not integrated with the specific discipline-related academic coursework.

Perhaps the most powerful of the three co-op curricula referred to in the literature is the collection of learning opportunities that unfold uniquely for each student in each co-op workplace. This emergent curriculum is different for each learner depending upon his or her job tasks, colleagues, work environment, previous experiences, personal interests, objectives, etc. Munby et al. (2003) talk about conceptualizing co-op workplace learning as curriculum. What emerges, they argue, is “working knowledge”, distinct in form, organization, and purpose from the knowledge found in school curricula. Co-op students readily point to the work placement -- the authentic tasks they perform, their supervisors, and their colleagues -- as the richest sources of their learning. Most co-op practitioners acknowledge the same, though there is little in the co-op discourse regarding the nature of workplace learning and how it may be best revealed and supported. In spite of the implicit recognition of the significant educational value of the work term, there is very little research examining co-op workplace learning from a curricular perspective (Chin, et al, 2000). Dewey (1901), Vygotsky (1978), Schön (1983), Lave and Wenger (1991) and Hung (1999) each provide insights into how students may learn through these types of
emergent experiences. They collectively talk about learners working in their zones of proximal development, being nurtured by "old timers" as they slowly become members of a community of practice, reflecting in and on their own experiences and those of others, and moving through a cycle of self-regulatory experiences, with each new experience building upon those before it.

With the co-op curriculum having so many varied definitions, it is difficult to fully appreciate even the small body of research work in the area of co-op and curriculum. If one researcher is referring to the curriculum as all that occurs on a work term, while another is referring to the academic course requirements and yet another to a course specifically designed to prepare students for the work term, it is easy to see how difficult it is to compare and contrast, or draw conclusions from this work much less move the field forward in a meaningful way. There is a definite need to clarify what is meant by "the curriculum" in co-op. To this end, I propose three distinct but related co-op curricula: 1. the school-based, discipline specific academic curriculum consisting of the courses required by a program of study; 2. the institutionally designed and delivered co-op preparatory curriculum intended to prepare and support students throughout their co-op career; and 3. the co-op workplace curriculum which emerges for each student in each workplace. While all three curricula are essential components of the co-op model, they are quite distinct. Perhaps the clearest difference lies in the answers to questions raised earlier regarding who controls the curriculum and to what end. Who decides what knowledge is to be valued?
How is that knowledge packaged and delivered? Who assesses the curriculum? And who benefits from the outcomes achieved through this curriculum? These questions, as they pertain to each category of curriculum, are considered next.

i) The Academic Curriculum

The discipline specific academic curriculum is the responsibility of the faculty members in a given academic area. Academics (sometimes in partnership with professional associations) determine what knowledge and skills are valued and required for a degree in a particular discipline and are responsible for the design, delivery, and evaluation of that curriculum in accordance with institutional standards. Teaching faculty are responsible for course content and delivery as well as all assessment. A major focus is on the maintenance of academic rigour and ensuring relevant external standards are met (where applicable) in order to safeguard the program’s academic integrity and professional designation. The academic curriculum is outlined in the institution’s calendar and each course is more fully detailed in individual syllabi. Students must successfully complete all academic requirements to ensure graduation. The core academic curriculum is generally followed by all students, both co-op and non-co-op, though there may be additional courses that co-op students are required to take. A strong academic curriculum ensures the reputation of the institution and provides students with a solid academic base. The key components of the co-op academic curriculum are the discipline specific courses that constitute it e.g. English Literature, Anatomy, Introductory Accounting, etc.
ii) The Co-op Workplace Curriculum

This curriculum is much more informal in its design and delivery. It is not so much planned as it is revealed to greater and greater extents as the student immerses him or herself more fully into the workplace community of practice. It is often the result of a combination of formal activities (e.g. job tasks, learning outcomes, performance feedback), informal activities (e.g. interpersonal interactions, professional development activities, social events), and opportunity (a natural mentor/mentee relationship develops, the co-op student is part of a development team that makes a breakthrough, a regular employee leaves and the co-op student takes on an enhanced role). This "emergent" curriculum is under the auspices of the employer and therefore primarily reflects related job tasks and requirements, but it is constantly being negotiated in light of the myriad other environmental factors at play in the workplace. The student's on-the-job learning opportunities are largely determined by the employer's needs, though often some consideration is given to the student's stated learning objectives. The co-op employer evaluates each student's performance mid-way through and at the end of the work term. This, along with the institutionally assessed work report, constitutes the majority of the grade assigned for the work term. A successful work term benefits both the employer (in terms of productivity) and the student (in terms of learning and future work opportunities). Sample elements of the co-op workplace curriculum include student and employer developed learning goals, work reports, on-the-job professional development opportunities such as seminars and workshops, work requirements
and job tasks, performance feedback reviews, reflective journals, worksite visits, participation on project teams and in social activities, and informal and formal mentorship opportunities.

iii) The Co-op Preparatory Curriculum

The preparatory curriculum is designed and delivered by the co-op program staff or faculty at the co-op institution. It is intended to help students prepare for the job search process, secure a co-op job, and enter the workplace with the tools and dispositions that will help them succeed. As previously noted, most co-op curricula include resume, cover letter, and interview development as well as basic workplace readiness preparation such as worker responsibilities, time management, conflict resolution etc. The co-op preparatory curriculum is designed, delivered and assessed by the institution, though given the desired outcome of employability, it is clear that employer needs are a major driver with respect to the curricular content. Employers have a vested interest in this curriculum as it can serve as a source of pre-training for them. Institutions benefit from a strong preparatory curriculum as their students should fare better in the placement process. And, students also benefit from a strong preparation - most immediately as their résumés receive good feedback and interviews result in job offers. In the longer term, students would also benefit significantly from any preparatory content that supported self-direction, knowledge and skill transfer, and transformative learning. Elements of the co-op preparatory curriculum typically include résumé, cover letter and interview modules, practice
interviews, job ranking, interview preparation and practice, workplace expectations, communication and conflict management skills, employee and employer rights and responsibilities, student and employer panels, and work term goal setting.

For the purposes of this thesis I will refer to these three curricula as the academic curriculum; the co-op workplace curriculum, and the co-op preparatory curriculum. The focus of this curriculum inquiry is on the institutionally managed co-op preparatory curriculum and how it may be analyzed, designed and delivered to best support co-op goals and workplace learning.

**How the co-op curriculum differs from traditional academic curricula**

Co-op curricula differs from academic curricula in many significant ways that impact upon design, delivery and assessment, particularly for the workplace and preparatory curricula. Key differences are outlined below:

**Student and Experience Centric versus Content Centric**

First and foremost the co-op curriculum centers on the learner and their experiences. While there is set content to be delivered, particularly in the preparatory curriculum (e.g. résumé and cover letter content and formats, interview preparation, employment standards information, co-op requirements and procedures, etc.), the desired outcome for co-op students is to optimize the learning experiences that emerge during their work terms. Given the great diversity of workplaces, job tasks, supervisors and colleagues each student will
encounter, the only known variable is the learners themselves. The key is to help each student recognize the learning opportunities in their unique environments and to learn how to take advantage of them to the greatest extent possible. This places the student at the centre of their own learning, and consequently at the heart of both the co-op preparatory and workplace curricula. In most academic courses the content is the focus of the course and the student's grasp of that content is assessed by way of exams or papers and given a grade value. For the co-op preparatory curriculum the assessment of the student's grasp of that content (e.g. principles of résumé writing) is measured at the institution (through critique and final approval of the résumé in the preparatory course) then more authentically by employers (e.g. did the résumé result in an interview?), often some time after the completion of the course. Given that the preparatory curriculum is intended to help the student both get a job and learn through that job, it should focus on both job placement skills and tools, and on assisting the student to better understand and manage their own learning. In addition to the traditional employability related content, material on learning style inventories, skills transfer, self-directed learning, theories regarding experiential and transformative learning and the learner's role therein, would help meet the second objective. It should also include specific opportunities to practice these concepts prior to the work term. As the students are at the center of this curriculum they should also play a formal role in its development and feel engaged as a partner in the learning agenda. From an educational perspective, the co-op preparatory curriculum is as much about
helping the student learn how to learn on the job as it is about getting the job, and this must be reflected in its design, content, and format.

**Locus of Control**

As compared to a classroom, the learning environments of co-op work terms are highly variable. Given this variability in everything from job tasks to supervisors, and from market variations (e.g. tech sector crashes, security industry booms, work shifts overseas) to major unexpected global events (e.g. SARS, 9/11, earthquakes) the co-op workplace curriculum can unfold very differently from what anyone may have anticipated. In Chapter Three many significant changes to the overall co-op landscape were discussed with respect to their impact on the model. At the workplace level, many smaller changes occur daily in response to all the variables that constitute that community of practice. The workplace curriculum emerges from this dynamic context, and while generally guided by the employer’s job tasks and student’s desired learning outcomes, it is heavily influenced by both the macro and micro changes affecting that environment. While the curriculum remains the responsibility of the institution, this aspect of it is no longer under its control. With employers as a full partner in this learning model, the learning that unfolds in their boardrooms, labs, cubicles, studios, control centres, and manufacturing plants is subject to all the variables that impact those environments and the worlds in which they reside. While lack of control and constant environmental change may be viewed as problematic for traditional educators, it is the root of much of the richness and unexpected
learning that comprises many co-op work terms. It is the source of the wonderful "problems" or "situations" that Dewey, Schön, and Freire speak about as being antecedents to learning. Rather than control them, the co-op preparatory curriculum should seek to help students recognize these opportunities when they present themselves and learn how to learn from them. The preparatory curriculum (versus workplace curriculum) is much more controlled in that it is a set curriculum delivered on campus by co-op practitioners or faculty. There is an opportunity through this curriculum to include key pieces of both procedural (knowing how to) and declarative knowledge (knowing about) that are relevant to the work term that follows. Much of the discipline specific declarative knowledge comes from the academic curriculum for a given co-op program, and one could argue that the workplace curriculum may cover a lot of the "how to" or procedural knowledge. The gap it appears is in both declarative and procedural knowledge regarding the student's role as a learner in the experiential context of the workplace. With the student at the center of the co-op curriculum, their role is significantly changed from what it is in school.

Student and Teacher Role Changes

In spite of significant new understandings regarding teaching and learning, the traditional North American classroom in higher education appears remarkably unchanged from last century. Although we talk about the value of constructivist approaches, authentic learning, adult learning principles, student engagement, and the transformative potential of education, higher education remains largely
delivered in a lecture style format with a professor transmitting information to reasonably large classes of relatively passive students. "Good" students take notes, follow directions, and solve the problems that are presented to them, with the solutions that were covered in class. The workplace presents quite a different learning model. "Good" workers take initiative, find and define problems from the messy situations in which they find themselves, and creatively work with others to solve them. Looking to see what others have done in the past with the same problem is not viewed as cheating but rather as smart and efficient. Students in business and industry must learn to both take and follow the lead as they move across work groups, between product lines, through politics and into the future -- both virtually and face to face. While the ability to follow instructions is important, so too is appropriately questioning them to gain a better understanding, challenge assumptions, or suggest new alternatives. Employers and colleagues take on teacher/mentor roles and learners move between both as they interface with old-timers and newcomers while on the job. These role changes are not often made explicit to the learner and many students struggle adjusting to their new environments. Too often good students wait for the problems to be presented, eager to solve them with the solutions they have learned in school. They grow frustrated when work is not regularly delivered to them while the employers wonder why such good students seem to lack initiative and require significant direction. Each workplace also has its own culture, adding extra challenges for co-op students working across diverse fields and increasingly in countries other than their own. Experiential curricula need to
acknowledge these differences and better prepare students for the multiple
cultures they will encounter and the changing roles they will need to assume to
negotiate the changing contexts.

Students also expect co-op experiences that are directly relevant to their
academic studies. While co-op jobs should be relate to the student's academic
and career plans, they are not always as obviously applied as they once were
when engineers built bridges and accountants “kept the books”. As noted in
Chapter Three, the co-op model has been adopted by many non-applied
disciplines, has partnered with many and varied workplaces, and has been used
much more as a career testing mechanism by students seeking to explore their
options in various fields. Relying upon a specific job placement to directly
complement a specific academic course is no longer realistic or perhaps even
desirable. In order to develop the integrative and interdisciplinary perspectives
necessary in today's global economy, the students need to be encouraged to
become self-directed, reflective learners who understand their skills in as broad
a context as possible. A curriculum in support of this necessarily focuses on the
students as learners and how they can recognize and integrate their learning
experiences, both in and outside of the classroom, to their advantage.

Knowledge is Contextual and Grounded in Different Purposes

Munby at al. (2003) describe a “curriculum at work” that differs in significant
ways from the school curriculum. One of the most important differences is its
view of "knowledge". They talk about "working knowledge" as being distinctly grounded in the immediate and discernible purpose of the work at hand. The learner is aware of this purpose and to a great extent most workplace knowledge is in the service of an action. The opposite could be said of school knowledge. The real purpose of much of the knowledge acquired in class is yet to be understood by the learner. The short-term goal of receiving an "A" or passing the course is often a student's central purpose. Their interest may be less in the subject matter than in making the grade or completing the requirement.

The purpose of most workplaces could generally be described as supporting either service or production. What students learn there is in support of one or both these purposes. In contrast, the stated purpose of co-operative education, since its inception, has centered around student learning and professional preparation. From a co-op perspective, what the student does on the work term should be at the service of their learning, their personal growth, and critical theorists would add, societal betterment. The extent to which this purpose currently drives co-op curricula is questionable. As noted, curricular content areas in support of such a purpose would be expected to include such things as corporate social responsibility, learning styles, transformational and lifelong learning, worker-management relations, and invoking workplace change.
Subject Matter Organization

Orderly sequencing of instruction is a hallmark of the school curriculum (Munby et al., 2003). Basic concepts are foundational to more complex ones and new knowledge is generally presented in orderly blocks, packaged as chapters or units. Students are gradually exposed to more complex materials, building upon the foundation laid out for them. Workplace knowledge is organized in a completely different way with students often being exposed to highly complex tasks early in their practicum, then presented with multiple opportunities to refine their performance and contextualize it within the larger scope of the work performed, over the work term (Munby et al., 2003). As the students become competent with one set of tasks they are introduced to other related routines and “learning then becomes a matter of being increasingly involved in selected portions of the work performed... as determined by the purpose of the workplace” (Munby et al., 2003. p.213). In the workplace, new learning opportunities are presented only once the learner has demonstrated his or her grasp of the current material and has thereby earned the opportunity for expanded challenges. In school, new material is presented each week according to the syllabus regardless of whether or not the student is demonstrating competence. To facilitate transitions and optimize learning in the workplace environment, these differences in how knowledge and information is presented should be made explicit to the co-op student and opportunities for them to learn in different ways embedded in the preparatory curriculum.
Marsick and Watkins (1990) would also differentiate the two main co-op learning environments (workplace and school) based upon their level of curricular formality. The academic and preparatory curricula would be described as supporting *formal* learning as they have been set in advance by educators and are delivered using more formal and traditional teaching methods (e.g. lecture, texts, assignments). The less controlled curriculum that emerges for each student through engagement in practice on co-op work terms would be considered to be supporting *informal* learning. The former is a more prescribed model of education, while the latter reflects the natural opportunities to meet “un-patterned learning needs” that arise outside of the institution. While different in the ways identified above, one of the conditions Marsick and Watkins describe as enhancing the effectiveness of both types of learning is critical reflection. This notion of reflection, central to many of the theories on learning and transfer presented in Chapter Four, should be evident in both the informal workplace co-op curriculum and the more formal preparatory co-op curriculum.

**Authentic vs. Controlled Environments and Assessment**

Although the adoption of “authentic” learning and assessment techniques by some schools acknowledges the value of contextualized, meaningful learning environments, its place in the classroom is somewhat oxymoronic in that it is meant to replicate authentic contexts within the significant confines of an institutional environment. Paid co-op jobs on the other hand present as authentic an environment as one could achieve short of being a full time staff
person. The authentic learning and assessment field, although classroom-based, nevertheless provides some useful perspectives on the motivational and transfer value of learning in a realistic context as well as some customized tools for teaching and assessing learning in authentic ways. Co-op curriculum developers can benefit from these authentic assessment practices as they provide alternative resources designed to better reflect “real life” learning. As a complementary and often contentious newcomer to many post-secondary institutions of higher education, co-op has often tried to assimilate and validate itself by trying to look more like a ‘real course’. In this ongoing effort for academic acceptance, many co-op programs have adopted traditional teaching and assessment models designed for classroom-based learning and applied them to the authentic learning context of co-op. It is however, difficult to validly measure learning in one learning model with tools designed for a completely different model. As the authentic assessment movement gains credibility in learning circles, programs such as co-op will have access to more practices and learning tools specifically designed for their more authentic, experiential environments.

Many differences exist between the school and workplace environments that affect learning. With limited institutional control over the co-op workplace curricula, the co-op preparatory curriculum must play a critical role in helping learners recognize learning opportunities in new environments, appreciate how best to learn in each new environment, and ultimately gain “managerial control”
of their skills and knowledge so they can use them to their advantage in future contexts. Left unattended, some of the richest sources of co-op learning may be overlooked and under realized.

The Importance of the Co-op Preparatory Curriculum

If the workplace curriculum constitutes some of the most powerful learning in co-op it should be supported in a variety of ways by co-op curricula before, during and after work placements. This places the preparatory curriculum in a critical role, responsible for ensuring co-op job readiness and learning readiness. Site visits by co-op personnel with students mid-way through their placements do provide an important opportunity for supporting student learning during the work term, but it is the pre- and post-work term preparatory and support work with students that becomes critical to ensuring optimal learning from the work experiences. It is not the employers’ responsibility to help students make meaning from their work experiences nor to help them make connections between their school-based learning and their work-based learning and experiences. It is the responsibility of the institution to help students develop the necessary knowledge and skills that will help them make the most from their various experiences. “Developing self-directed learning skills can be the single most important educational outcome that can be attained through work-enriched educational experiences” (Heinemann et al, 1992). A learning outcome of this significance must not only be identified but also specifically addressed and supported through the appropriate curriculum. Just as it is not the employers’
primary responsibility to ensure students make the connections between school and workplace learning, neither is it the primary responsibility of the teaching faculty or the academic curriculum. The responsibility for supporting the development of self-directed, reflective, work integrated learning skills for all co-op students, and for providing students with the tools and opportunities to practice these throughout their co-op career, lies squarely with the co-op program and its preparatory curriculum. There is an assumption shared many co-op professionals that such skills and outcomes are a natural result of the work experience itself but as Ricks et al. (1990) observed, these are assumptions, not conclusions reached through the research. A major finding from an earlier study conducted by the author (Johnston, 1996) concludes that there is a “need to find a way of enabling students to gain from a contextualized co-op experience, a more general understanding of the resultant learning (much in the way that the co-op work experience provides the opposite; a way for some of the generalized academic learning to become contextualized)” (pp.120). These learning connections between the general and the specific, and across one context to another, are critical to one’s ability to mobilize his or her knowledge and skills to new situations. Such understandings and connections rarely occur for the learner on their own. The transfer research indicates that in the absence of prompting, connections between two similar but distinct events or experiences typically remain unrecognized by the learner. The “new” knowledge is effectively trapped in the place it was learned, severely limiting the overall learning that may be gained and later transferred to new environments.
and problems (Sternberg and Frensch, 1993). In order to ensure such learning outcomes for co-op, the preparatory curriculum must specifically address the knowledge and conditions necessary for the development of self-directed learning and the enhancement of skills transfer, then promote multiple opportunities for practicing and assessing both.

Co-op students report that the workplace is where the "real" learning in co-op occurs and they place much less value on the co-op preparation and support they receive from the institution before, during, and after their work term (Johnston, Angerilli, & Gajdamaschko, 2003). Many practitioners in the same study also rated elements of the co-op preparatory curriculum and related practices reasonably low with respect to their role in co-op learning. Whether the preparatory curriculum in most co-op programs is indeed poor, or simply perceived as poor, the result is the same – it is not valued by important stakeholders with respect to overall learning. Most programs continue to rely heavily on co-op employers and the job tasks students perform for the delivery of co-op learning (Heinemann, DeFalco, & Smelkinson, 1992). Ironically, this reliance on the workplace curriculum assumes a great deal in terms of the students' abilities to effectively identify opportunities, assume new roles, and construct new knowledge and skills in ways that enable them to gain managerial control over what they know and can do. As previously noted, research in adult learning and transfer indicates that such skills are indeed difficult and rarely
occur spontaneously. They can however be taught and prompted using various learning strategies.

This, I believe, is the most important role of the preparatory curriculum. With work terms providing such a rich and diverse source of learning opportunities, the preparatory curriculum must focus on preparing students for, and supporting them through, those opportunities. With a very few exceptions (Heinemann, 1983 and 1992), there is very little research, or even professional discourse, connecting the institutionally delivered preparatory and academic curricula to stated co-op outcomes in higher education. The co-op preparatory curriculum’s role has been marginalized, generally relegated to one of basic job preparation with little analysis or theorizing directed at its enhancement. This has left one of the most powerful opportunities for supporting co-op learning vulnerable to becoming disconnected from the work experience, uninformed by new understandings and circumstances, misaligned with stated program goals and assessments methods, and perhaps most disturbingly, directed by interests other than those of the learners.

In addition to the critical role of preparing students for learning in the workplace, the preparatory curriculum has a tremendous opportunity, and arguably a responsibility, to provide students with the knowledge and skills needed to effectively engage in the betterment of those workplaces. Dewey in his writings
on education and experience referred directly to this responsibility vis-à-vis workplace education:

(Workplace education's primary objective should be) the development of such intelligence, initiative, ingenuity, and capacity as shall make workers as far as possible masters of their own industrial fate ....not one aimed to "adapt" worker to the existing industrial regime....but one which will alter the existing industrial system and ultimately transform it. (Dewey, 1977)

A democratic workplace education program, he would argue, should have as a central purpose the development of educated and empowered worker-citizens -- individuals able to contribute effectively to today's workplaces while concurrently working to change them for the better. These students would see and understand the contradictions in their educational and work experiences, and understand the role of power in both contexts. Such students would have the ability to deconstruct work – they would not only learn to work but about work (Kincheloe, 1999). A truly transformational curriculum in co-op would need to marry the development of competencies and dispositions that students need to succeed as workers, with the development of critical thinking and tools required for these same students to honour their important role as work changers. How this might be done remains to be seen, and would undoubtedly vary across individuals and contexts.

Although no specific processes for introducing critical pedagogy to workplace education exist, empowered students and teachers are those who believe in a
sense of possibility that some positive change can emerge from their deeper understandings of the world and what shapes it. Central to this is the notion of experience or projects that are grounded in “democratic values, good work, worker participation as workers and researchers, workmate co-operation, and a larger vision of social change” (Kincheloe, 1999, p.202). Interestingly many co-op work placements would fit the description of a “social change project” project (e.g. the Food Bank, Loving Spoonful, literacy and AIDS programs, UNICEF, etc.). Still other co-op work experiences present opportunities for engagement in such projects through workplace initiatives (e.g. United Way fundraising, participating in the Peace Walk, presenting at Globe 2004 conference, etc.) and it is these kinds of experiences that need to be further exploited in co-op for their potential in delivering a critical education. “Whether through work placement or experience with a project, critical workplace education teachers give students the opportunity to reflect upon and examine what they have done” (Kincheloe, 1999, p.203). In a critical pedagogy, all experiences are worked on, reviewed as social constructions, and challenged.

As noted in Chapter Four, co-op is ideally situated to introduce such a pedagogy with stakeholders in both worlds, but it is also at great risk of raising issues that may not be welcomed by some employers and students and in so doing placing the program in some jeopardy. The complexity of this paradox has been explored in the work of Brown (2000) who attempts to conceptualize a critical post-modern theory for work related learning by engaging all stakeholders in the
process. This is no small task for consideration but one that should not be ignored. With growing concerns about the corporatization of education, co-op may be able take a lead in working with, versus for, business and industry partners. In a recent Journal for Academic Labor article, Huber (2002) discusses education’s responsibility with respect to workplace preparation and partnerships:

"Corporations promote corporate values but shouldn’t educational values differ, even slightly? Shouldn’t we make a distinction between the human being as a developing (person) and working adult? Furthermore, shouldn’t education in the long run, be about the making of a well-rounded citizenry capable of participating in a democracy? Shouldn’t education value the preparation of each person to be a productive member of the community rather than merely producing members of the workforce? And given the distinctly American value placed on a free speaking, free thinking population, isn’t it wise to demand that corporate interests be held at arm’s length from the determination of what counts for knowledge and its creation? “ (Huber, 2002)

Acknowledging the validity and importance of these questions in the co-op context is a start. Exploring whether and how such issues might be included in the co-op preparatory curriculum will require much more consideration.

Without question the preparatory curriculum must assist students in developing the knowledge, skills and employment tools needed to be successful in the co-op placement process. But those employability skills and tools, though required, are not sufficient preparation for a fully successful co-op experience. The co-op preparatory curriculum must also prepare students for, and support students
through, the workplace learning experiences they will encounter throughout their co-op careers. Finally, I would argue that there is the potential for the co-op preparatory curriculum to introduce a critical pedagogy for those seeking personal and social transformations through their co-op experiences. For all these reasons, the co-op preparatory curriculum plays a vital role in co-op students' experiences. As such, it should be reviewed and revised regularly to ensure it is informed by current understandings regarding teaching and learning and inclusive of the subject matter relevant to contemporary programs.

*Standards and Expectations for the Co-op Curriculum*

In accordance with national standards, accredited co-op programs in Canada must deliver a "co-op orientation/preparation program for students prior to their first work term, with topics covered including co-op program goals, résumé preparation, interview skills, learning objectives, and preparing for the work term, including standards of student behaviour" (CAFCE Accreditation Guidelines, 2003). This is in fact the only specific reference to the preparatory curriculum for co-operative education made by the accreditation body for co-op in Canada. Other requirements such as work term reports are noted as part of the assessment requirements, but the only co-op curricular content specified refers to job search tools and skills (résumé, cover letter, and interview preparation), job readiness preparation (employer expectations, standards of students behaviour), and program requirements. Other than encouraging the development of work term learning objectives, there is little required by the
Canadian national accreditation council for co-op with respect to specifically assisting in supporting and maximizing student learning during work terms or helping students develop the ability to transfer their skills and knowledge between the school and work environments. The Accreditation Council for Co-operative Education in the United States has a similar gap with respect to the articulation of specific learning-oriented content in the co-op curriculum (ACCE website, http://www.co-opaccreditation.org/2005). It would appear that the co-op governing bodies also assume that these outcomes will occur as a natural result of participating in the work experience and there is therefore little need to develop curricula specifically designed to help students optimize the learning from those experiences. Dewey (1901) states in his “Pedagogic Creed: “In a sense, the school can only give us the instrumentalities of mental growth: the rest depends upon an absorption and interpretation of experience” (pp.3-17). Co-op programs need to ensure that learners are equipped with the means and motivation to both “absorb and interpret” as much as possible from their workplace experiences. Anything less once again positions co-op as a placement model versus an educational one.

It could also be argued that co-op programs that operate within the public post-secondary academic environment should contribute to the realization of the educational goals institutions expect of all their graduates. These would include objectives such as developing critical thinking and decision making skills, fostering individual and social responsibility, encouraging personal development,
and contributing to the betterment of society. As noted in his Convocation address, Dr. Michael Stevenson, President of Simon Fraser University underscores these expected outcomes:

"We know that the economy needs and will reward the combination of a specialized expertise in a major subject with the core competencies you have acquired as a result of a good liberal education: analytic skills, communication skills, interpersonal and teamwork skills. We know, above all, that the most important capacity you have acquired here is a capacity for independent and critical thought, for posing deep questions and for developing original and creative approaches to solving problems. This most important competence is measured not by information accumulated, but by the ability to accumulate and process information; not so much by what you have learned, as by your knowledge of how to learn." (President Michael Stevenson, SFU, Convocation Address, 2002).

If a co-operative education program is to contribute to such a set of institutionally articulated student outcomes and attributes, it must do so explicitly through its curriculum and implicitly through its practice. The Canadian Association for Co-operative Education also cites as an outcome of co-operative education, the development of "well-qualified graduates who are prepared to assume a productive role in society" (Co-op Benefits, CAFCE web site, 2005). This is reminiscent of the more specific outcomes Hermann Schneider outlined for his inaugural co-op students. And just as Schneider ensured that the original curriculum supported these specific outcomes regarding learning and citizenship, so too must contemporary co-op curricula. Co-op governing bodies need to acknowledge that it is insufficient for co-op preparatory programs to focus on job search skills and employer expectations with little, if any, attention
paid to helping students maximize the learning from those job placements. The preparatory curriculum in co-op must do both in order to support the learning objectives and promises that this model of education purports. It is a critical, if somewhat neglected, piece of the co-op learning puzzle.

Chapter Summary

Definitions of curriculum and the very direction of the field have changed substantially over the past 20-30 years. The narrow research focus on curriculum design has been greatly expanded to consider many aspects of curriculum, in particular to understand its impact and the forces that impact upon it. The definition of curriculum has moved well beyond “the course of study at a university or college” to, for some, include “one’s life course of actions”. This thesis uses the Miller and Seller (1991) definition of curriculum as “an explicitly and implicitly intentional set of interactions designed to facilitate learning and development and to impose meaning on experience”. In so doing it focuses on the construction and re-construction of knowledge from experience, a concept central to the workplace learning in co-operative education.

The co-op curriculum has not been well defined in the research literature and as a result it is difficult to get a clear sense of what is being discussed across the various studies. Unfortunately, the co-op curriculum has been assumed to be a single curriculum that somehow encompasses the academic coursework, work search skills and on-the-job learning that support the co-op learning model.
Based upon an inductive analysis of the literature, three categories of curricula emerged in support of co-operative education: 1. the academic curriculum set for each discipline by the academic faculty, 2. the workplace curriculum which emerges uniquely for each work term under the auspices of the employer, and 3. the preparatory curriculum designed and delivered by the institution in preparation for and support of student work terms. All three co-op curricula play important roles in supporting the overall co-op learning experience but the focus of this inquiry is on the co-op preparatory curriculum and its critical role in support of the co-op workplace curriculum. Little attention has been specifically paid to the co-op preparatory curriculum in the research. It has been predominantly characterized by a series of workshops, modules or classes delivered to students before their first work term on topics such as résumé preparation, cover letter design and interview skills with little, if any, attention given to preparing students for the learning opportunities they will encounter and very different roles they must assume as learners in the workplace. Because of the close relationship between the co-op preparatory and workplace curricula, each must consider the other in its development. But school- and workplace-based learning environments differ in several important ways that must be considered by co-op curriculum developers. These include differences in the role and value of declarative versus procedural knowledge, in information sequencing and presentation, in the amount and type of instruction, in the nature of assessment, in the ways of learning, and in the goals and control over the curriculum (adapted from Chin, Munby, and Hutchinson, 2000). These
distinctions need to be specifically addressed in the co-op curricula as they permeate the learning environments that students move between. Most of the research regarding the nature of learning in co-op has focused on the learning that occurs during the co-op work term, and while it is implicit that it is different, little has been done to define those differences and specifically prepare and support students for them.

In order for the preparatory curriculum to serve not only as preparation for the job search process but also for the learning that can be expected on the job, these dual purposes need to be explicitly stated. The nature of co-op workplace learning must be clearly articulated and understood so that it may be appropriately supported. Consideration of the learning theories and dynamic milieus described in Chapters Three and Four, and the differences between classroom and work-based curricula discussed this chapter, provides a strong base for the development of such a curriculum. Similarly there is an opportunity, and perhaps even a responsibility, for co-op programs to introduce a critical pedagogy to their preparatory curricula for all those students and programs seeking transformative experiences through their co-op participation. While this presents many challenges, it is an important addition to the co-op discourse, and one that merits much more attention as co-op continues to grow and diversify.
Contemporary co-op curricula need to be regularly reviewed to ensure they reflect these new perspectives and considerations. To this end, co-op curriculum reviewers and developers would benefit from a framework for the analysis of co-op curriculum that prompts such considerations. Various curricular frameworks exist to assist with the assessment and development of classroom-based curriculum. Several of these are examined next chapter with an eye to how they might inform the development of an analytic framework for co-op curricula.
CHAPTER SIX:
CURRICULAR FRAMEWORKS AND CO-OP

At the root of most contemporary educational theory is a particular worldview that reflects certain beliefs about the purposes and methodologies of education. Psychological and philosophical ideas regarding teaching and learning, as well as political, cultural, and economic considerations come together to form particular models of reality that, explicitly or implicitly, guide curriculum design and delivery. In order to investigate the co-op preparatory curriculum, understanding the perspective or orientation from which it emanates is most useful.

Curriculum theory work over recent decades has focused on identifying various worldviews through which curriculum is created and implemented so as to better understand the implications that these perspectives have on researchers, programs, teachers and learners. Depending upon the particular curricular orientation, certain theories and practices are privileged over others. Educators generally adhere to two or three orientations in their development of curriculum. In order to more easily follow and use what can quickly become a messy array of theories and orientations, several theorists in recent decades have focused on identifying clusters of orientations that reflect major positions in education.
These frameworks help curriculum analysts identify belief systems and patterns that influence both content and delivery, provide a bigger picture perspective within which to understand current curriculum and develop future curriculum, and identify and attend to gaps and inconsistencies. They help make explicit many hidden assumptions about a curriculum and in the process provide an opportunity to re-think those assumptions in light of new theories and circumstances. These frameworks provide different lenses through which to view a curriculum and elements from each framework collectively serve to provide the multi-focal perspective taken in the development of a framework for the analysis of the co-op curriculum.

Eisner and Vallance’s curricular orientations

One of the earliest versions of a curricular framework is provided by Eisner and Vallance (1974). They were among the first to “identify orientations that emerge from diverse alternative prescriptions for the content, goals, and organization of the curriculum” in an effort to analyze “the implications of an otherwise confusing body of arguments” (Eisner and Vallance, 1974, p. 2). They describe five orientations to curriculum development:

1. The cognitive process orientation focuses on developing a repertoire of cognitive skills applicable to a wide range of intellectual problems. This approach is primarily concerned with the development of intellectual operations and refers more to the “how” (process) than the “what” (content) of the curriculum. The assumption is that the learner develops a set of content independent skills applicable to a variety of
situations. This focuses on the individual and what goes on in their minds, and less on the broader social context. This orientation is supported by a 19th century psychological tradition that sees the key to learning resting in an overall workout of the mind. In developing a fitter mind, the learner improves their generalizable intellectual skills that they can then apply to learning of any kind. This orientation may reflect the dominant, though generally unspoken, perspective of many co-op practitioners who rely heavily on the learners to take their various work term experiences and somehow distil them into generalizable skill sets that will readily transfer across contexts: school to work and back, and job to job. The underlying assumption within this orientation is that skills can and will transfer across contexts, something the literature on skills transfer has found to be problematic (Detterman and Sternberg, 1993) and extremely challenging. The degree to which any transfer occurs appears directly related to the learner’s perception of fidelity between the learning and transfer situations. Near transfer, transfer between two very similar situations, is the only type that has been shown to occur without significant prompting. Far transfer, between two contexts that appear different to the learner, is the most common scenario encountered by learners and that type of transfer rarely occurs naturally in these situations. The most difficult transfer appears to be with subject matter that is of a broad or generalized nature (such as that suggested in this orientation) as opposed to the transfer of a particular technical or foundational skill. In order for learners to optimize their potential for transfer, the curriculum needs to support the development of metacognitive skills, including reflection, and provide ample opportunity for practice. In so doing the learner becomes better able to recognize similarities between two apparently different events and make the cognitive connections necessary for the transfer of relevant knowledge and skills. Designing co-op curricula within this
cognitive processing orientation would require extensive review of how these issues regarding skill and knowledge transfer could be resolved.

2. The **technology orientation** presents a systems approach to the ways schools can efficiently achieve various ends. This, like the cognitive approach described above, also focuses more on the process of a curriculum than its content. It presumes that there is a “most efficient” way to get to a pre-identified curricular endpoint. It is therefore concerned with developing a “technology of instruction” that best packages and presents material to the learner. In this sense the focus is less on the learner or even how they interact with the material but rather on the technology or systems by which the material is communicated. Distancing itself in this way from both the content and the learner, developers using a systems approach claim to deliver a more value-free learning experience -- an assertion that situated learning and critical theorists would argue is impossible. The language of this orientation is production-oriented exploring inputs and outputs, and a host of other systems that “produce” learning. This perspective assumes that learning occurs in certain systematic and predictable ways and can be optimized through discovering how to make it happen more efficiently. It may have interesting implications for the analysis of more recently developed online co-op preparatory curricula but does little to acknowledge the social and situated nature of workplace learning. The technology orientation may have limited value in helping developers better understand co-op curriculum beyond delivery efficiencies.

3. The **self-actualization orientation** provides a context for individuals to discover and develop their unique selves. This is also known as the “curriculum as consummatory experience” approach, as it focuses squarely on the learner ensuring that they each have a satisfying learning experience. It is very learner-centric and growth-oriented, and
positions education as the means to personal liberation and development. It is re-constructionist in a very personal sense and therefore somewhat reformist. It implies the need to free oneself from socially contracted bonds in order to develop integrity and autonomy in a pressure free environment. This emancipatory orientation expects education to deliver both the content and the process for self-discovery. The co-op workplace curriculum is similarly learner-centric but less for self-actualization reasons than pragmatic ones. While it focuses on student growth and development, the nature of this growth and development is determined by those activities that contribute to the employers' needs and outcomes. This is not an orientation that is typically reflective of most contemporary co-op programs but does reflect elements of the transformational learning described by Mezirow (1991) in Chapter Four.

4. A social reconstruction orientation focuses on schools needing to be relevant to their students' and the society's needs. In this worldview, societal needs take precedence over individual needs with reform and responsibility for the future society the desired outcome. A social reform approach requires schools to play an important role as a bridge between what society is and what it could be. It expects the curriculum to provide the tools for "individual survival in an unstable and changing world" (Eisner and Vallance, 1974, p. 11). It also expects that issues regarding political power are explicitly dealt within the curriculum and that a variety of creative options for change are explored with students. Within this orientations are two sub-groups. The more conservative is adaptation-driven, looking for tools and ways of thinking to help learners survive in the world. The more aggressive sub-group is social re-constructionist oriented, and is seeking tools and ideas for changing the world for the better. Should the transformational potential of co-op and the notion of introducing a critical pedagogy become learning
outcomes of a re-conceptualized co-op model, both would be well supported by this and the previous orientations.

5. The academic rationalism orientation uses and appreciates recognized works from culturally relevant artistic and academic disciplines. This orientation is the most traditional in the sense that it draws from ideas and objects created by humans and pre-supposes that the best way to participate in culture is to be exposed to the greatest thinking and products of that culture. Typically these can be found in "the disciplines" which in North America remain dominated by the traditional Western canon. The argument for a strong liberal arts education falls squarely in this orientation. Academic rationalism remains a dominant perspective in much of contemporary higher education. To include elements of practical learning in this curriculum could be seen as diluting the quality of education. In this orientation, applied programs such as co-operative education are often marginalized. Academic rationalism is confining to co-op in its Platonic biasing of thinking over doing. While there has been a call for co-op programs to adopt a more "academic" approach in order to be seen as more integral to the educational experience of the student (Cates and Jones, 1999), one must also be conscious of the limitations and risks of such a strategy. Co-op's real value, I believe, is in its difference from the academic program. Steps toward developing academic syllabi for co-op courses that mirror traditional courses, and adopting assessment procedures familiar to academic rationalists need to be considered with caution. The desire for assimilation into, and acceptance by, the traditional academy could in fact suppress a thorough inquiry into the differences between co-op and classroom learning. A focus on difference could lead to the development of new tools and activities designed to identify and support the unique learning provided through this model and link it back to the classroom. In trying to assimilate into the academic rationalism orientation, co-op risks losing the advantages it offers
through its very different approach to learning. Co-op should be seen and celebrated as a complement to the academic learning a student experiences, not an extension of it.

In 1986, Vallance updated the earlier mapping she and Eisner had proposed, dropping the self-actualization orientation (which she felt had "lost currency") and adding two more: 1. personal success: curriculum seen as a means to an immediate practical end, and 2. personal commitment: curriculum as a means to creating personal interest in lifelong learning, regardless of discipline.

Eisner and Vallance's (1974) conflicting conceptions of curriculum provide a useful way to begin to analyze curriculum with respect to its underlying values and beliefs. As most classroom curricula developed for use in schools "reflect one of more of these orientations to different degrees" (p.193), so too, I would argue, do most co-op curricula. The personal success and social re-constructionist orientations each have elements that best reflect the dominant (though seemingly contradictory) perspectives evident within much of post-secondary co-op curricula, but it is the academic rationalism orientation that provides the greatest insight into the struggles co-op often experiences with fully integrating into the academy or developing within certain disciplines. An argument against co-op by some academics is that its value is purely instrumental in its singular purpose of enhancing personal workplace success for its participants. Such a personal success orientation, some contend, is not the mandate of universities but rather more the domain of community colleges.
and technical institutes. These same critics might well embrace the *academic rationalist* perspectives again citing, as would Plato, that the academy is lessened by the distraction of practical programs such as co-op.

Co-op may also reflect many characteristics of the *social re-constructionists* perspective that sees schools as agents of social change and "demands that education be relevant to both the student’s interests and to society’s needs" (Eisner and Vallance 1974, p.135). In the Canadian context, society’s needs are increasingly being defined by government and industry that currently appear to be driven by an economic agenda more so than by a social justice agenda. Education is expected to produce graduates that can succeed in the global workforce and effectively contribute to the emerging economy. While little has been articulated in policy regarding education’s specific role in *social re-construction* per se, there is a definite sense that higher education is being increasingly held accountable for the production of work-ready graduates. As noted in Chapter Three, public education more than ever is becoming linked to economic outcomes and this is evident in the nature of funding for both new programs and research. Currently co-operative education does a good job of ensuring that business and industry’s collective workforce needs are recognized and met. This enables businesses and organizations to continue on their current paths to success, usually defined in financial terms, secure in the knowledge that appropriately educated and trained workers are coming out of the post-secondary system. However, in the social re-constructionists’ own words, co-op
may be better at preparing workplace survivors than workplace changers. The notion of co-op introducing a critical pedagogy that empowers new workers to question existing workplace mores and practices may do a disservice to both the new workers and the workplaces they enter. Yet, continuing to promote the status quo may also be undermining our ability to better our world, or at least public education’s mandate to develop critical and engaged citizens ready to go out and make the world a better place. The role that co-op does, could, or should play in any “social re-constructionist” educational agenda needs to be further examined in terms of co-op’s educational mandate within this tri-party model (institution-student-employer).

Eisner and Vallance note that most of the controversy in educational discourse

“…reflects a basic conflict in priorities concerning the form and content of curriculum and the goals towards which the schools should strive; the intensity of the conflict and apparent difficulty in resolving it can most often be traced to a failure to recognize conflicting conceptions of curriculum. Public educational discourse frequently does not bother to examine its conceptual underpinnings. (pp.1-2).

This is also true of the professional discourse in co-op. There is scant discussion of the conceptual underpinnings of the co-op curricula with respect to its current role in public post-secondary education. As a result, much of the content of the co-op curricula has evolved in reaction to the changing needs of a single, powerful stakeholder – the employer. While the employer is a critical partner in the co-op model, co-op programs need to question the extent to which this one
stakeholder should direct the development of the co-op curriculum. It should be noted that the *workplace* curriculum that unfolds for students on their placements is already substantially influenced by the employer's goals, activities and work environment. The *academic* curriculum remains under the auspices of tenured faculty but academia is under increasing pressure from governments, business and industry to respond to external feedback and direction. Significant federal funding for the improvement of post-secondary education was awarded last year in the U.S. to a project seeking to develop a corporate feedback system for post-secondary curricular reform. The *preparatory* curriculum delivered to students while at the institution, before and between work terms, is developed by co-op staff and faculty. However given the very strong focus of this curriculum on employability skill development, it too has been largely driven by employer needs and feedback. A growing number of researchers are suggesting that co-op should play a much greater role in providing students not only with the knowledge and skills needed to "get the job" but moreover, knowledge and skills regarding how to maximize their learning experience once they are on the job. These two goals are quite different, yet inter-related. If they are to co-exist it must be reflected in distinct curricular content and design. If they are deemed incommensurable, the purpose of the co-op work term must be re-visited and clarified.
The explicit, implicit, and null curricula

Eisner (1985) proposed that most curricula are in fact comprised of three distinct curricula: the explicit curriculum which is the stated course of study, the implicit or hidden curriculum which refers to that which is taught but not specifically stated, and the null or non-existing curriculum which refers to that which is not taught even though it may be relevant to the subject matter. The explicit curriculum is the publicly stated content and format found in course syllabi, program guides, calendars etc. For the co-op preparatory curriculum this would include modules on résumé development, workplace readiness, interview research etc. The implicit curriculum is that which is taught, both intentionally and unintentionally, but never stated in any syllabi or course outlines. A teacher may, for example, wish to develop teamwork skills among her students and embed several opportunities for group work in her classes without ever stating this as a learning outcome for her course. Alternatively a teacher may unintentionally instil competition as a social value over co-operation through the various ways in which he tests and rewards students. This may be simply because he was taught that way, or he personally values competition and is passing that value along to his students without consciously thinking about it. In a co-op context examples of the hidden curriculum could include perspectives subtly passed along to students such as discouraging critique of employers or supporting management over unions (or vice versa). The null curriculum deals with what is not included in a curriculum, either implicitly or explicitly, intentionally or unintentionally. It represents an insidious potential as certain
content is systematically excluded in order to preserve a particular perspective or position. In co-op for example, it is rare to find any curricular content dealing with labour management conflicts or the development of the labour movement, even though these tensions are evident in a great number of the workplaces with which co-op students engage.

The notion of multiple curricula proposed by Eisner, and elaborated upon somewhat by Cuban (1993), provides an important base for subsequent discussion by critical theorists around the meaning of curricula. It raises key issues that can help guide discussions around our earlier questions regarding “what subject matter is important?”, “chosen for and by whom?” and “for whose benefit?”

**Miller and Seller’s metaorientations**

A more recent framework for curricula is provided by Miller and Seller (1990). They describe three *metaorientations* of curriculum (transmission, transaction and transformation) and the philosophical, psychological and social contexts that shape them. The notion of metaorientations nicely synthesizes a number of perspectives into three major categories, allowing for easy comparisons of various curricular components across the different orientations. Following is an outline of the Miller and Seller (1990) metaorientations and a brief overview of their impact on curriculum construction and delivery.
1. **Transmission:** In this view of curriculum the function of education is to transmit facts, skills, and values to students. Focus is on content mastery through traditional teaching methodologies, in particular textbook and lecture-based learning. The teacher is in charge and the learner is a relatively passive recipient and retainer of the information. Its philosophical roots in logical positivism and psychological roots in behavioural psychology can be linked to an overall favouring of traditional values. Transmissive learning environments continue to be dominant in higher education around the world.

2. **Transaction:** Here the learner is seen as a capable and intelligent problem solver who brings valuable prior knowledge and experience to the learning equation. Students “dialogue” with the curriculum and the “teacher”, and through this process construct new understanding and knowledge. Its philosophical roots can be traced to Dewey’s pragmatism and psychologically it is connected to Piaget’s cognitive developmental theories. Problem solving through a scientific method approach is believed to be the best way to develop a student’s intelligence. This orientation is associated with small “I” liberalism and supports a general belief that rational thinking can improve the social good. Increasingly elements of this orientation are being introduced and embedded in the post-secondary environment (e.g. tutorials, online fora and blogs, seminar courses).

3. **Transformation:** This orientation is interested in personal and social change and focuses on a movement toward harmony with the environment versus efforts to control it. Originally the transformative view was rooted in more romantic notions that the learner is essentially good and that nature should let the inner child develop with minimum interference. More contemporary versions speak to the emancipatory nature of this orientation. Reflected in the work of Micheal Apple and Paulo Freire, the transformative orientation focuses on personal
change and empowerment, ultimately driving the social justice agenda. Mezirow's (1991) work on transformative learning, detailed earlier in Chapter Four, represents a significant extension of this metaorientation. At this time, very few institutions of higher education are fully committed to the delivery of transformational learning.

These metaorientations are further analyzed by Miller and Seller with respect to their effects on the purpose of a curriculum, the role of the teacher, educational practices and assessment. This provides a very useful tool for reviewing a given curriculum, or part of a curriculum, to look for internal integrity. Is, for example, the educational aim of the curriculum supported by practices and assessment tools that are consistent with that aim? In co-op, this could mean reviewing the purpose of the work report, site visit, or practice interview and ensuring that the ways in which those are supported and assessed throughout the curriculum are aligned. If a stated aim is transactional in nature (e.g. have students reflect upon learning connections between school and work), how successful will a curriculum be that is delivered and tested using transmissive educational practices and assessment models (e.g. produce a 15 page work report on one of the five topics provided using a prescribed reporting format and have it graded by an outside reader)? Similarly when designing curricula, this framework provides a useful reference for ensuring that the philosophical and psychological underpinnings of a program are honoured throughout each curricular element. If for example, a stated aim is to nurture self-direction in learners, the curriculum should provide ample opportunities for student-led
projects, students setting their own deadlines and standards, students taking and being rewarded for initiative, etc.

Table 3 below identifies several of these teaching and learning implications as they relate to the Miller and Seller (1990) metaorientations and provides an easy comparative reference for curriculum reviewers and developers.

Table 3: Curricular Orientations and Teaching/Learning Implications

<table>
<thead>
<tr>
<th>Aim</th>
<th>Transmission</th>
<th>Transaction</th>
<th>Transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curricular Orientations</td>
<td>Mastery of discipline content</td>
<td>Development of rational intelligence and complex problem solving skills</td>
<td>Self-actualization of learner involvement in social betterment</td>
</tr>
<tr>
<td>Type of Action</td>
<td>Instrumental (use outcome as a means to an end)</td>
<td>Deliberative (through discussion)</td>
<td>Moral (pursuing justice)</td>
</tr>
<tr>
<td>Examples from Co-op</td>
<td>Building a resume using a template</td>
<td>Co-constructing a resume with peers/employers/co-ordinators</td>
<td>Re-constructing a resume highlighting issues re. equity and social justice</td>
</tr>
<tr>
<td>Sample Educational Practices</td>
<td>Memorization (role learning)</td>
<td>Collaborative &amp; co-operative learning</td>
<td>Critical dialogue</td>
</tr>
<tr>
<td></td>
<td>Lecture (direct instruction)</td>
<td>Active &amp; experiential learning</td>
<td>Reflective practice</td>
</tr>
<tr>
<td></td>
<td>Prescriptive feedback</td>
<td>Observation &amp;modeling</td>
<td>Journaling</td>
</tr>
<tr>
<td></td>
<td>Content mastery</td>
<td>Scaffolding &amp; reflective practice</td>
<td>Service learning</td>
</tr>
<tr>
<td></td>
<td>Tylerian curricular design</td>
<td>Prior learning assessment</td>
<td>Critical pedagogy</td>
</tr>
<tr>
<td>Role of Teacher</td>
<td>Responsible for setting all curriculum (scope, sequence, content)</td>
<td>Facilitates development of student inquiry skills</td>
<td>Communities of practice</td>
</tr>
<tr>
<td></td>
<td>Instruction very didactic, students respond to teacher initiatives</td>
<td>Shows interest in how the learner is approaching problems and helps them through their thinking</td>
<td>Interdisciplinary activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teacher must first work on selves in a process of both being and becoming</td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td>Traditional achievement tests of content mastery</td>
<td>Testing for analysis and synthesis skills as well as for use of problem solving frameworks</td>
<td>Authentic assessment tools such as rubrics, peer and self-evaluations, journals, and portfolios</td>
</tr>
</tbody>
</table>

158
The Berlak Dilemmas

The Miller and Seller framework has also been examined with respect to the practical issues faced by teachers and programs as a result of potential philosophical, psychological and social conflicts or differences. These tensions were originally identified in 1981 by Berlak and Berlak as dilemmas. They identified 16 dilemmas in total, each with a statement consisting of two ends of a position that may be taken on a particular educational issue. Table 4 presents the Miller and Seller metaorientations as they relate to nine key Berlak Dilemmas.

### Table 4: Curricular Orientations and the Berlak Dilemmas

<table>
<thead>
<tr>
<th>Curricular Orientations</th>
<th>Transmission</th>
<th>Transaction</th>
<th>Transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Whole person versus whole person</strong></td>
<td><strong>Whole person and person as learner</strong></td>
<td><strong>Whole person versus person as learner</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Educator control versus learner control</strong></td>
<td><strong>Educator control and learner control (shared)</strong></td>
<td><strong>Educator control versus learner control</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Personal knowledge versus public knowledge</strong></td>
<td><strong>Personal knowledge (especially knowledge exploration and verification) and public knowledge</strong></td>
<td><strong>Personal knowledge and public knowledge (personal knowledge as a filter through which public knowledge is viewed)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Knowledge as content versus knowledge as process</strong></td>
<td><strong>Knowledge as content versus knowledge as process</strong></td>
<td><strong>Knowledge as content versus knowledge as process</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Intrinsic versus extrinsic motivation</strong></td>
<td><strong>Intrinsic versus extrinsic motivation</strong></td>
<td><strong>Intrinsic versus extrinsic motivation</strong></td>
<td></td>
</tr>
</tbody>
</table>

Adapted from Miller and Seller (1990)
<table>
<thead>
<tr>
<th>Transmission</th>
<th>Transaction</th>
<th>Transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning is holistic versus learning is molecular</td>
<td>Learning is holistic versus learning is molcular (neither — focus is on process and frameworks)</td>
<td>Learning is holistic versus learning is molecular</td>
</tr>
<tr>
<td>Each learner is unique versus each has shared characteristics</td>
<td>Each learner is unique and each has shared characteristics</td>
<td>Each learner is unique and each has shared characteristics</td>
</tr>
<tr>
<td>Learning is social versus learning is individual in nature</td>
<td>Learning is social and learning is individual in nature</td>
<td>Learning is social and learning is individual in nature</td>
</tr>
<tr>
<td>Learner as person versus learner as a client</td>
<td>Learner as person versus learner as a client</td>
<td>Learner as person versus learner as a client</td>
</tr>
</tbody>
</table>

The bolded portion of each dilemma indicates the side of the dilemma emphasized by that orientation; both in bold indicates either an integration or a balance of the two. (from http://parenthood.library.wisc.edu/Thomas)

Table 4 provides a concise overview of both the Miller and Seller (1990) orientations and selected Berlin dilemmas (1981) with respect to how these two frameworks intersect. More importantly, it provides another way of viewing curriculum and understanding some of the conflicting positions from which it is possible to approach curriculum design and development.

Eisner and Vallance (1974) and Miller and Seller (1990) describe their respective orientations as discrete entities, however both pairs of researchers acknowledge that most curricula reflect more than one orientation. What these frameworks provide is a way of viewing (and reviewing) curriculum with respect to multiple perspectives and the philosophical and practical issues regarding teaching and learning that result. They consolidate many educational theories and usefully remind designers and developers of the complex web of conflicting issues upon which much curriculum rests. What they do not do as fully as some of the curriculum inquiry models that follow is provide for an in-depth exploration.
the underlying, often hidden and power-laden, messages that are communicated through curriculum, both intentionally and unintentionally. The concept of multiple curricula (Eisner, 1985), and in particular the notion of hidden and null curricula noted earlier, provide a powerful means of revealing and examining implicit curricular messages, some of which may be more powerful than those delivered through the explicit curriculum.

In an effort to further identify the biases inherent in curricula, Pinar, Reynolds, Slattery, and Taubman (1995) present the idea of curriculum as text, or as various discourses, each representing particular voices. They contend, “each discourse contains particular language, patterns of thought, and norms about what is appropriate and valuable” (p.7). Considering curriculum as discourse encourages attention not only to how people talk about curriculum but also to gaining greater understanding of inherent themes and structures. This perspective of curriculum emphasizes the critical role of language and allows for a focus on what is important to the people who represent, and are represented by, that discourse. It is important to hear how the people “living the curriculum” describe it. Listening to and analyzing employer, student, faculty, and practitioner conversations and stories about co-op reveals the curricular themes and structures that are most valuable to them. This may help identify and explain the multiple, and sometimes conflicting, discourses and languages that have been used to describe the co-op model. Pinar et al (1995) outline the following curricular discourses: historical, political, racial, gender, post-modern,
aesthetic, theological, institutional, and autobiographical/biographical. In 1998, Beyer and Apple added to Pinar et al.'s list introducing a *moral discourse* to curriculum inquiry through a series of questions they posed in eight categories: epistemological, political, economic, ideological, technical, aesthetic, ethical, and historical. Through such incisive questions as “Who should control the selection and distribution of knowledge?”, “How is the control of knowledge linked to the existing and unequal distribution of power, goods and services in society?”, “Whose knowledge is it and to whose benefit is it being disseminated?”, and “How do we give personal meaning to students?” Beyer and Apple explicitly place a moral lens on curriculum. Their questions force a critical examination of power and control as they relate to a curriculum and its stakeholders, and open the door to a much more complex and potentially threatening inquiry than does a more traditional, narrower discussion regarding program elements and outcomes. This critical theory, or post-modern moral discourse has particular relevance to the co-op model that must simultaneously address the distinct needs of three different stakeholders: students, the academy, and employers. Questions regarding whose knowledge is valued in co-op and who benefits from the successful transfer of that knowledge to students lead back to the fundamental question regarding the goals and purpose of co-operative education. Is this model primarily designed to prepare students for successful transition to the existing world of work, in which case it is clearly the employers’ knowledge that is valued and the employers (and arguably the students) who benefit. Or, does co-op have a broader educational
purpose and responsibility to create mindful, critical thinkers empowered by the knowledge and skills needed to enter the world of work and productively contribute to its betterment? These questions have never seriously been explored in the co-op literature but I believe they are foundational to curriculum inquiry in co-op and to the subsequent design and delivery of effective co-op curricula.

Cultures of Curriculum

Joseph, Bravman, Windschitl, Mikel, and Green, in their 2000 book “Cultures of Curriculum”, propose a potentially powerful framework that integrates both procedural perspectives and extends the notion of multiple curricular discourses. These authors present the concept of curriculum as culture -- “a revealing system of implicit and explicit beliefs, values, behaviors and customs in classrooms and schools that are deliberated within communities and other public spheres” (Joseph et al., 2000, p. ix –x). Seen as culture, curriculum becomes a much more dynamic and interactive phenomenon that inevitably transforms, and is transformed by, the people, artefacts, beliefs and habits that constitute it. It assumes there are shared ways in which people see things, learn and categorize them, think and talk about issues, react to and value them, use their time and space, and work and play with each other. It therefore assumes that culture influences epistemological beliefs, and conversely epistemological beliefs have an influence on culture (Joseph et al., 2000). This perspective requires one to move beyond examining curricula from a purely procedural
perspective (e.g. particular program elements, outcomes, and methods of assessment) and begin to explore the ways in which shifting educational and social priorities influence curriculum development. Much as Eisner did with her notion of multiple curricula, Joseph et al. (2000) examine the implicit and explicit belief systems that underpin curriculum development and, like the critical theorists, question how to better integrate moral and political discourse into discussions of curriculum. Fundamental to utilizing this type of inquiry is a willingness to question and critique the underlying assumptions, purposes, and claims of a curriculum so as to ensure a coherence of vision and alignment of goals, content, format and assessment with that vision.

Joseph et al. (2000) acknowledge the important ways in which many of the existing frameworks for analysis influenced their conceptualization but felt the need for an expanded conception that focused more on underlying belief systems, everyday behaviours and interactions, and the allocation of decision-making power. Six cultures of curriculum are described in their framework:

i. Training for Work and Survival: This educational culture focuses on students acquiring the basic skills, habits and attitudes necessary to function in the workplace and to adapt to living within contemporary society.

ii. Connecting to the Canon: The goal of this culture of curriculum is to acquire core knowledge, traditions, and values from the dominant culture's exemplary moral, intellectual, spiritual, and artistic resources as a guide for living.

iii. Developing Self and Spirit: This curricular culture is directed towards learning according to self-directed interests in order to nurture individual potential, creativity, and knowledge of the emotional and spiritual self.
iv. **Constructing Understanding:** This culture seeks to develop fluid, active, and autonomous thinkers who know that they themselves can construct knowledge through their study of the environment and collaborative learning with others.

v. **Deliberating Democracy:** This curricular orientation is about learning and actually experiencing the deliberative skills, knowledge, beliefs, and values necessary for participating in and sustaining a democratic society.

vi. **Confronting the Dominant Order:** Curriculum in this culture seeks to examine and challenge oppressive social, political, and economic structures that limit self and others and to develop beliefs and skills that support activism for the reconstruction of society. (Joseph et al., 2000, p.12-13)

The authors propose that most curricula are comprised of overlapping cultures, often sharing important commonalities. Where Eisner and Vallance (1974) and Berlak and Berlak (1981) believe these overlaps create conflicts or dilemmas, Joseph et al. propose that such a view is limited in its ability to fully explain curricular orientations. It is easy to see how a given curriculum could be more readily critiqued for its conflicting elements than re-conceptualized to include shared elements from more than one culture or orientation. It could, for example, appear that the co-operative education curriculum is fully accounted for by Joseph et al.'s "Training for Work and Survival" culture, and arguably that culture may have sufficiently described the culture of the co-op curriculum when it was originally conceived in 1906. A closer look at some contemporary models of co-op education that articulate pedagogical goals in the areas of personal development, self-directed learning, reflection in and on practice, and transformative learning quickly reveals the limitations of this singular cultural classification. Certainly aspects of the cultures defined as "Developing Self ", "Constructing Understanding", "Deliberating Democracy", and perhaps even
"Confronting the Dominant Order" can also be seen to support many co-op learning outcomes. However, when more than one culture appears to represent a curriculum as suggested in the above example, curriculum analysts need to strongly consider which elements of one culture can be meaningfully transposed into another culture. As long as beliefs from each culture neither exclude nor contradict the other, it is reasonable to conclude some degree of transposability (Joseph et al., 2000). Such a hybrid culture however must be created with care, considering which components would work in harmony, which might conflict, and what might be lost in the mix. The researchers caution that a hasty amalgamation of curricular cultures is likely to result in “a morass of incongruous educational practices”. Interestingly, they pose the following question to illustrate their point regarding potentially conflicting cultures:

"Can we create composites (of cultures) knowing that we will have to work with inherent tensions -- for example, inquiry stemming from themes about power relationships when studying the canon and work education? ... When content and learning activities are used for multiple but unrelated (or conflicting) purposes, they contribute to an ad hoc curriculum that has little significance to learners and teachers." (p.165)

One clear culture of curriculum has definite advantages for both the teachers and learners. However in the absence of any one of the cultures presented by Joseph et al. fully describing the co-op curriculum, the exercise of creating one could serve the model well. This would require public discussion within the field and serve (hopefully) to unify stakeholders and practitioners through a clear vision that would guide the articulation of goals, standards and ideals. Such an
exercise could be part of a re-conceptualization of co-operative education as it enters its second century.

There is the implicit belief in any identified culture or community, including that of co-op education, that there is a shared sense of purpose, a common belief system, and a somewhat universal approach to practice. Because of this sense of a shared culture among many practitioners, questions regarding the underpinnings of the co-op curriculum rarely arise. It is a challenge, and often threatening, for any culture to truly examine itself. In the absence of an alternate cultural experience, one's own behaviours, feelings, and attitudes feel "right" because they are the norm. The idea that they might be biased by unquestioned, inherited, and perhaps even contradictory assumptions and beliefs may never naturally arise. The framework proposed by Joseph et al. (2000) is intended to raise the kind of questions that help make the implicit, explicit and in so doing deepen the understanding of the culture of curriculum. The authors detail each culture with an opening statement (through a quote from an advocate) regarding the key ideas that represent that cultural orientation. This is followed by an example of what a classroom representing this culture would look and feel like, including the themes, beliefs, and practices at work in such a setting. A brief vision for the culture is also articulated (including learner goals and societal benefits of such a culture of curriculum), some history regarding how the culture has been present (or not) in schools and an overview of the forces, events, and ideas have influenced this culture of curriculum. This
is followed by an exploration of student and teacher beliefs regarding students' needs, interests and roles, and finally a series of questions designed to explore the curricular content (what it is and how it is organized), the delivery context (classroom environment and instructional organization), and the assessment process (how students are evaluated and how the success of the curriculum is determined). Finally, this framework (Table 5) allows one to examine critical issues regarding decision-making, power, and individual and social problems that might arise from the vision of such a culture of curriculum.

Table 5: A Framework for Understanding a Culture of Curriculum (Joseph at al., 2000, p.23)

<table>
<thead>
<tr>
<th>Focus</th>
<th>Question</th>
<th>Quote</th>
<th>Impressions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>What statement(s) synthesizes belief within this culture of curriculum?</td>
<td>What depiction of education within this culture of curriculum captures many of its important themes and assumptions?</td>
<td>What are the goals of education or schooling for the individual?</td>
</tr>
<tr>
<td>History</td>
<td>What is the ultimate benefit for society if all individuals were educated in this culture of curriculum?</td>
<td>How has this culture of curriculum been present in schooling?</td>
<td>What are the forces, events, and ideas that influenced this culture of curriculum?</td>
</tr>
<tr>
<td>Students</td>
<td>What are the beliefs about students' needs, development, competencies, motives, and interests?</td>
<td>How have these beliefs influenced practice?</td>
<td>What are the beliefs about students' needs, development, competencies, motives, and interests?</td>
</tr>
<tr>
<td>Teachers</td>
<td>What are the beliefs about the role of the teacher?</td>
<td>How should they facilitate learning?</td>
<td>What are the beliefs about the role of the teacher?</td>
</tr>
<tr>
<td>Content</td>
<td>What constitutes the subject matter?</td>
<td>How is the subject matter organized?</td>
<td>What constitutes the subject matter?</td>
</tr>
<tr>
<td>Context</td>
<td>What is the environment of the classroom? Of the school?</td>
<td>How is instruction organized?</td>
<td>What is the environment of the classroom? Of the school?</td>
</tr>
<tr>
<td>Planning</td>
<td>What are the models of curriculum development?</td>
<td>Who plans the curriculum? Who has the power to make decisions?</td>
<td>What are the models of curriculum development?</td>
</tr>
<tr>
<td>Evaluation</td>
<td>How should students be assessed?</td>
<td>How is the worth or success of the curriculum determined?</td>
<td>How should students be assessed?</td>
</tr>
</tbody>
</table>
Chapter Summary

Procedural perspectives and educational outcomes have dominated the field of curriculum development over the years. Historically there had been a fairly narrow focus on programs, learning outcomes and assessment with little talk, and even less research, into the "norms, endeavors, and values" that surround both co-op curriculum development and delivery (Joseph et al., 2000). Several frameworks designed for more traditional inquiries are reviewed in this chapter. Key among them are the Eisner and Valance's (1974) curricular orientations (cognitive processing, technology, self-actualization, social reconstruction, academic rationalism, and later personal success) and the Miller and Seller's (1990) meta-orientations (transmissive, transactional, and transformational). Berlak and Berlak's work in the early 1980's explores dilemmas of practice that arise as a result of conflicting philosophical, psychological, and social agendas and this underscores the important role that these aspects of curriculum play in the review, development, and delivery of the curricular elements. Eisner (1985) extends the notion of conflicting agendas and offers an early introduction to more of a critical inquiry approach with the conception of three curricula.
constituting any one curriculum. The idea that there may be an explicit, implicit and null curriculum in all that we teach opened the curriculum field to more rigorous discussion about the purposes, practices, and power of education, and set the stage for the introduction of moral and social visions for curriculum.

Pinar et al. (1995) and more recently Joseph et al. (2000) extend this broader approach to curriculum review and development adding the notion of curriculum as text, and introducing various cultures of curriculum respectively. Joseph et al. (2000) present a way of perceiving curriculum as culture, encouraging reviewers to examine the beliefs and assumptions about their curricular culture and question how those beliefs should be reflected in practice. It is their hope that once the discourse about beliefs, goals, and congruent practice is stimulated, there may be an opportunity to “challenge the prevailing culture of schooling and the fragmentation cause by unexamined innovation” (p.173).

In the upcoming chapter, Robert’s (1980) notion of informed eclecticism discussed in Chapter Two becomes a critical one. Elements from the various frameworks presented in this chapter are used, and in some cases extended, to allow for a multi-focal examination and critique of the unique events and practices of the co-op preparatory curriculum. This approach to analyzing the co-op curriculum is intended to better reflect the complex and dynamic co-op learning environment outlined in Chapter Three, the models of co-op learning
described in Chapter Four, and the unique aspects of the co-op curriculum discussed in Chapter Five.
CHAPTER SEVEN: PROPOSED FRAMEWORK AND ANALYSIS OF CO-OP PREPARATORY CURRICULUM

The Framework for Analysis of Co-op Curriculum

The framework developed for the analysis of co-op curriculum (outlined in Figure 1) incorporates new definitions of co-op curricula, contemporary models of teaching and learning, and new ways of thinking about curriculum that extend beyond process and into curricular orientations and philosophical underpinnings. It also seeks to explore the hidden and null curricula that may be simultaneously at play and provokes a critical analysis that seeks clarity regarding the purpose and goals of contemporary co-op programs. It is largely intended as a tool for developers and practitioners interested in assessing and re-thinking the co-op curriculum with new eyes and from multiple perspectives. It is not a lock step process but the sequence presented is intended to guide discussion from big picture (co-op program, overall curriculum) to the more specific (a given curriculum or selected curricular element), in order to situate whatever is being reviewed within a larger context. This framework serves to guide the analysis by promoting discussion about the underlying beliefs and values that drive the curriculum. Given the complex and multi-stakeholder environment of co-op, understanding these curricular levers and the various perspectives or
orientations they represent, is critical. A brief overview of the framework is provided next, followed by the “testing” of the analytical framework using the résumé module from the Phantom preparatory curriculum.
Figure 1: Co-op Analytical Framework
The first phase of the co-op analytic framework is the identification of the specific co-op curriculum to be reviewed by using the definitions of the co-op curriculum outlined in Chapter Five. If the review is of an individual curricular element (e.g., the work report, the interview preparation module), the first phase of the analysis involves a review of the overall curriculum from which that element is derived. For example, if the work report is under review, the first phase of the analysis involves the co-op workplace curriculum.

**Figure 2: Phase 1: Identification of Co-op Curriculum**

Once the specific curriculum has been identified, reviewers are encouraged to fully examine the culture of that curriculum using questions adapted from Joseph et al.'s (2000) and Eisner and Vallance's (1974) frameworks for conceptual and cultural analysis. Guiding questions for this discussion include why does this
curriculum exist? What are the goals of this curriculum for the student, the employer, and the institution? How do these relate to stated co-op program goals? What beliefs underpin those goals? What are the forces, events, and ideas that influenced this culture or concept of curriculum? And who determines what content is important, and what is that based upon? Based upon the results of this examination of curricular culture, reviewers are invited to re-visit the curriculum and its purpose(s). This exercise is intended to provide a clear conceptual base against which to consider individual curricular elements as well as to lead directly into the next phase of the analysis -- the articulation of the curricular purpose(s).

Figure 3: Phase 2: Examination of Culture and Identification of Purpose(s)
The next phase of the review involves the identification of the main purpose(s) of the curriculum and the primary stakeholder relating to each purpose. This purpose is referenced against the stated co-op program goals to ensure alignment. If the co-op program from which the curriculum comes does not have clearly stated goals, these need to be articulated and discussion should then shift to the "program" level in order to ensure shared understanding of the role of the co-op program in that particular institution. If the curricular purposes (e.g. to help students develop critical skills to analyze and improve the workplaces they will be entering) appear to be misaligned with the stated program goals (e.g. to ensure students demonstrate the competencies and characteristics employers seek to successfully secure 100% placement rates), reviewers may want to focus on reconciling this potential misalignment before proceeding. If there are multiple curricular purposes that are conflicting or incompatible (e.g. the key purpose of the preparatory curriculum is to ensure employer needs are met versus to ensure student learning on work terms or to support students’ career and personal planning development), reviewers are invited to re-visit their conceptualization of the co-op program and align key curricular purposes with key program goals.

If the purpose is clear, or multiple purposes are mutually supportable, the discussion shifts to the identification of key elements from the curriculum under review. If a curriculum is being examined as a whole, all major curricular elements that constitute that curriculum should be identified. For example, if the Preparatory Curriculum is being examined in its entirety, the key components
noted in the Phantom Preparatory Curriculum detailed later this chapter, or a subset thereof, would be analyzed separately to get as representative a picture of that curriculum as possible. If a large curriculum were being analyzed, several smaller review teams could be struck, each with responsibility to analyze one or more key elements. The collective review team would participate in the larger discussions in Phases 1 and 2 regarding curricular culture and purpose(s), then separately analyze the selected curricular elements in Phase 3 before joining together again in Phase 4 to share observations and make recommendations. In order to identify key curricular elements (if they are not readily apparent) all subject matter and practices related to a given curriculum need to be considered. For the Co-op Preparatory Curriculum one would consider each content area or module (e.g. resume development, job search process, interview preparation) and any major “deliverables” associated with that module (e.g. ranking forms, mock interviews). Also included in the conceptualization of a key curricular element are any regular activities and interactions that accompany the delivery of that element such as peer and employer feedback on résumés, goal setting with staff and employers during site visit, discussion of work report with faculty, contributing to case studies, etc. The following are examples of curricular elements from the Co-op Preparatory curriculum:

- Co-op program requirements (e.g. work reports, evaluations), policies and procedures, contracts, roles and responsibilities, etc.
- All lectures, classes, workshops, or other modules (e.g. online forums, guest panels, student presentations) that cover key subject matter such as résumés, cover letter, interview preparation, workplace realities, ethics, conflict management, etc.
Assignments requiring feedback such as résumés, cover letters, case studies etc.
Quizzes and projects
Feedback from employers on applications and interviews; after the work term de-briefings
Peer reviews
Self-assessment (interview reflection, resume approval)
Face-to-face interactions between staff/faculty (employers) and students such as with interview practice, ranking assistance, goal setting and decision making
Interviews with employers

With the curricular element(s) for review identified, the most intensive part of the analysis begins. Each element is examined as it relates to curricular and program purposes, educational milieu, multiple curricula (explicit, implicit, and null), critical pedagogy, and curricular orientations. The questions guiding this phase of the analysis have been designed to reflect various theoretical perspectives and contemporary critiques regarding curriculum. This multi-focal perspective provides for different conceptions of each curricular element, and hence the curriculum, depending upon which lens is in focus. The framework questions (outlined in full in Appendix 3) are adapted from an exploration of:

- multiple concepts of curriculum (Eisner and Vallance, 1974; Vallance, 1986)
- meta-orientations underpinning curriculum (Miller and Seller, 1990).
- critical pedagogy (Beyer and Apple, 1998; Brown, 2000).
This phase of the analysis should provide for rich discussion. Curriculum analysts will check the alignment of the content, assessment, and format with purpose, goals and rationale to determine whether the subject matter and structure is consistent with the curricular aims. The analysis should also reveal any unexpected outcomes and potential uses of the curriculum other than those intended by the developers. This should lead to suggestions regarding any changes that may be needed to better align purpose with content and design as well as identify any content gaps or outcomes needing to be addressed.

The final phase of the framework for analysis moves the discussion from the philosophical and theoretical to the practical, resulting in recommendations for
curricular change. If multiple teams were concurrently analyzing several curricular elements they would now re-group for discussions regarding the necessary modifications to the various curricular elements reviewed within the context of the overall curriculum. It is recommended that any major changes be vetted with all major stakeholders (faculty, employers, students and co-op staff/faculty). To facilitate this part of the process, review teams would ideally be composed of at least one representative from each of the major stakeholder groups.

Figure 5: Phase 4: Identification of Issues and Recommendations

The Phantom Curriculum and Selected Element for Analysis

In order to test the co-op analytic framework, a co-op curriculum is needed. In reviewing syllabi and course overviews from several different North American co-op universities, and speaking with numerous co-op educators, it became evident that many preparatory curricula share common content and formats. As the focus of this dissertation is the framework for analysis (versus the analysis of a
particular curriculum), I did not want to be biased, distracted, or limited by selecting a specific program's curriculum for analysis. Based upon observable themes that emerged through my curricular review, I have created a Phantom Preparatory Curriculum from which to select a specific element for analysis. This Phantom Curriculum is the result of an analytic exercise designed purely to provide a generic, yet representative, curriculum for the testing of the framework. As such it is a hypothetical curriculum that has elements familiar to many co-op programs, yet specific to none. In this way, the discussion of the framework's viability can be more broadly executed, without the need to account for the specifics of any one program's context or peculiarities. The testing of the analytic framework will naturally concurrently yield a review of the Phantom Curriculum and recommendations regarding it and the résumé module in particular. Should some of the resultant discussion resonate with particular readers, it is my hope that it will serve to begin conversations about co-op curriculum analysis, design, and development and encourage individual programs to experiment with their curricular materials using the co-op analytic framework.

The Phantom Curriculum is a result of my fifteen years of experience in co-op curriculum design, development and implementation, informed specifically by sample syllabi and course materials from the University of Waterloo, Ottawa University, Simon Fraser University, University of Cincinnati, Northeastern University, and Drexel University (see Appendix 1 for each program's detailed syllabus). The Phantom Curriculum is outlined next:
Phantom Preparatory Curriculum

Co-op 101: Preparation for First Work Term
September 2006 – December 2006

Format: All classes are lecture style with some group work and discussion.

Learning Outcome: This course is intended to prepare you for successful participation in the Co-op Program at Phantom University.

Grading: This course is graded Pass/Fail based upon regular attendance, participation and successful completion of a co-op résumé and active participation in the work search process. There is no integral academic credit awarded for this course but it is a pre-requisite for the co-op work term.

Week One: Introduction to Co-op
- Syllabus and course content discussion
- Application process
- Roles and expectations
- Independent job search process and rewards
- Important dates and deadlines
- Using the online job posting system

Week Two: Career Planning
- Skills and values self-analysis
- Career planning
- Co-op job expectations
- Co-op job search process

Week Three: Résumés
- Goal of the résumé
- Components of a résumé
- Résumé content
- Résumé format/layout – types of résumés
- Professional image and style
- Résumé Do’s and Don’ts

Week Four: Résumés (cont’d) and Cover Letters
- Résumé approval by co-op co-ordinator
- Goal of the cover letter
- Components of a cover letter
- Types of cover letter
- Professional image and style
- Cover Letter Do’s and Don’ts

Week Five: Interviews
- Goals of the interview
- Types and formats of interviews
- Dress for success
- Your role and responsibilities
- Key performance areas employers look for
- Sample questions
- Interview Do’s and Don’ts
- How to prepare for an interview
- Interview etiquette

**Week Six: Practice Interviews**
- In-class mock interviews with peers and staff

**Week Seven: Break - Co-op Interviews**

**Week Eight: Workplace 101**
- Surviving and thriving
- Professional conduct – rights and responsibilities (labour law, diversity, harassment, workplace safety, etc)
- Attributes employers seek
- Setting work term learning objectives
- Workplace case studies – resolving difficult situations (ethical, legal, moral, etc.)

**Week Nine: Student and Employer Perspectives**
- Co-op student and employer panel presentation and Q&A

**Week Ten: Workshops for Students Not Yet placed**
- Review of problem area(s) – résumés not getting an interview, not applying to enough, getting interview but no offer, etc
- Remedial work on problem areas
- Next Steps

From the Phantom Curriculum above, one element will be selected for individual review using the framework for analysis. In order to help determine which to choose, Schwab’s (1973) framework of curricular commonplaces is used as a guide. Schwab outlines what he believes are four critical components of curriculum that must be considered in any curricular review: 1. *subject matter* (i.e. knowledge of the curricular materials of the discipline and its underlying system of thought), 2. *learners* (i.e. knowledge about the learners in terms of their
motivations, unique qualities, career goals 3. teachers (knowledge regarding what the curriculum implementers already know and their readiness to learn new materials and methods) and, 4. milieus (knowledge of the social structure of the learning environments – typically the school and classroom.

These commonplaces have been used by other researchers and theorists to help ground their thinking about curriculum. Connelly and Clandinin (1988) use the commonplaces to uncover the logic and emphasis in a given rationale for curriculum as expressed by teachers, students, parents, and politicians. Others explore commonplaces for the metaphors they reveal (Joseph et al., 2000) such as the learner being seen as an “empty vessel” or as the “building blocks of a strong economy”. Still others have used Schwab’s framework to examine the balance each commonplace has in terms of its influence on the curriculum and consider whether one is more powerful than another in terms of rationalizing curricular choices. What the commonplaces do is focus attention on the assumptions and values that underpin curriculum and provide a way of ensuring key elements of a curriculum are included in curricular analyses. Within this context, I have selected the Résumé Module (Week Three) from the Phantom Curriculum as it has a strong focus on subject matter and learner goals, and bridges two milieus, the classroom in which it is created and approved and the “boardroom” in which it is ultimately evaluated. This curricular element should test the framework from a variety of perspectives and provide good material for discussion.
Analysis of the Phantom Curriculum and Résumé Module Using the Co-op Analytic Framework

Phase 1 of the Analysis

The co-op preparatory curriculum was selected for analysis because of its important role in preparing students for their work terms. With the Résumé module identified for specific review, Phase 2 of the analysis takes a step back to focus on understanding some important features of the curriculum in which the module resides. This will provide a larger context within which to situate the analysis of the selected element. In this case it is the culture of the Phantom Preparatory Curriculum that is examined.

Phase 2 of the Analysis

In this Phase, the reviewer is asked to first consider the intent of the preparatory curriculum, its raison d’être and the worldview it represents. As noted in Chapter Five, North American co-op accreditation bodies cite the preparatory curriculum as a requirement for students prior to their first work term to ensure that they are familiar with co-op program goals, résumé preparation, interview skills, learning objectives, and the standards of student behaviour expected on the work term (CAFCE Accreditation Guidelines, 2003). The Phantom Preparatory Curriculum reflects these recommended content areas. It would appear, based upon professional standards and practice, that the aim of the co-op preparatory curriculum is an instrumental one -- to provide students with the knowledge and skills required to secure and progress in a co-op job. This aim is situated within a concept of curriculum that focuses on preparing students for the
world of work and success outside of school. It presumes an important role for
the school in preparing workers for successful transitions to the labour market,
and in the case of the co-op model it also presumes a co-educator role for
employers. But the co-op analytic framework presents several other conceptions
of curriculum for consideration, some of which extend well beyond the traditional
conceptions of co-op. Indeed some co-op programs and preparatory curricula
state intentions of helping students develop their “problem solving skills in real
world contexts” and to “develop each student’s personal and career goals”. Other
co-op programs explicitly state that the preparatory curriculum is intended to help
students optimize their learning during the work term (see curricula from
University of Cincinnati and Simon Fraser University, Appendix 1). The inclusion
of learning objectives in the Phantom Curriculum also speaks to this intent
directly. It would appear that the purpose of the preparatory curriculum may be
more complex than is currently represented in accreditation materials or reflected
in standard curricular content. Multiple purposes, conflicting or not, often reflect
different ways in which people view the curriculum. The notion that there may be
more than one conception of the preparatory curriculum is a critical one,
recognizing a shared core across most programs but acknowledging other
curricular purposes and perspectives, each of which is emphasized differently,
depending upon the larger program’s purpose and place within the institution. For
example, a co-op program in international development designed for students in
the arts and the humanities could have a strong emphasis on “social
reconstruction and relevance” (Eisner and Vallance, 1974) or reflect a curricular
culture of “deliberating democracy” (Joseph et al. 2000). With the expansion of co-op into disciplines that tend to attract more students with social reformation interests and a growing number of employers in the not-for-profit and non-governmental organization sectors, many co-op programs are offering a number of opportunities for students to engage in real world critical inquiries and community development and reform projects. As co-op programs become more diverse and specialized, they will differentiate themselves precisely in these ways, which will necessarily impact the curriculum.

The co-op preparatory curriculum has the potential to be much more than the job search “tool kit” into which it appears to have evolved in the Phantom Curriculum. At the very least it is also responsible for preparing students for the workplace learning they will encounter during their co-op term which, it has been noted, is qualitatively different from the school-based learning they have experienced. At its best, the preparatory curriculum could also serve as preparation for lifelong learning and personal and social transformations, the seeds of which would be planted and nurtured in the co-op work terms and activities in which the students partake. While sharing a core of job search information and tools, programs could then be differentiated by the additional content and activities that best reflect their particular educational and philosophical perspectives. For the purpose of this test of the framework I will define three major intents or conceptions of the Phantom Preparatory Curriculum, each of which appeared in more than one of the syllabi consulted. The first and most obvious conception of
the Phantom Curriculum is one of “developing the skills and tools for a successful work search”. This is perhaps the most universally accepted conception of co-op and its curriculum. It implies that a successful work search will naturally lead to a successful work term for both student and employer. Research indicates that such an assumption may be problematic. It presumes students will readily adjust to the new workplace learning environment and that employers are aware of, and prepared to take on, their new role as educators. These presumptions explain why a second conception of the Phantom Curriculum, “gaining an understanding of, and preparation for, co-op workplace learning”, is largely unattended to in both the content and process. The reference to setting learning objectives in Week Eight of the Phantom Curriculum presumes that this is an important feature in preparation for the workplace, but little more is specifically directed towards this conception. Finally there is a conception of curriculum that is not reflected in the Phantom but which I would like to add. This is the notion of curriculum for “developing critical analysis skills for constructive personal and societal change”. This final conception of the Phantom Curriculum is one I have chosen to add because I believe it represents an important potential of the co-op curriculum (as discussed in Chapter Five). For most co-op programs adopting such a conception of curriculum would be quite unlikely. Although such perspectives and skills would serve all graduates well, I have never seen them explicitly stated as a goal of any co-op preparatory curricula I have reviewed. I have added this conception of curriculum to this test of the analytic framework in order to see how it plays out.
Following the flow of the co-op analytic framework, the reviewer is asked to consider how the curricular purposes serve the goals of the co-op program. As the Phantom Curriculum is a composite of curricula from many programs, it cannot be linked back to any one program's goals in particular. For the purpose of this exercise let us use the hypothetical program goal of “100% student placement”, which is a common goal for many co-op programs. The curricular intent or conception of “supporting a successful work search” is clearly the primary one in support of this program goal. The other two curricular conceptions (preparing for on-the-job learning and developing critical analytical and change management skills) are secondary unless they relate back to other program goals. As this part of the analysis is intended to examine the congruency between program and curricular aims, and to identify any conflicting aims, the second curricular aim (to prepare for workplace learning) could be seen as supportive of the stated program goal of 100% placement in that it should increase student success on the job and therefore positively impact placement and retention. The third aim of providing students with critical analysis skills and tools may not be seen to be supporting the program goal of 100% placement. It could, in fact, be seen to be in conflict with it if students were entering workplaces with intentions of critique and reform while employers had no shared understanding of this aim. If such as curricular aim is to be retained, it must align with and support a program goal such as “developing active and engaged citizens” or “contributing to the betterment of society” and be supported by all stakeholders. Broad statements regarding the development of active citizenry are
not uncommon institutional goals for graduates, though few co-op programs have embraced them in the context of workplace reformation for the obvious challenges they present. Should this third conception of the preparatory curriculum not align with any programmatic goal of the Phantom Curriculum, its retention should be questioned and/or rationalized. It is possible, for example, that such an aim could pertain to a particular discipline's co-op program at the institution (e.g. social policy) and not the entire co-op program and therefore could remain as part of the curricular goals for that subset of students. In the case of the Phantom Preparatory Curriculum I will link this third curricular aim back to a hypothetical program goal regarding the development of engaged citizens so that it may remain a part of this exercise.

With the general conceptions and aims of the Phantom Curriculum articulated, the Phase 2 framework questions guide the reviewer to discuss the “educational vision” for each of the co-op stakeholders. Perhaps the vision for the students is clearest in the Phantom Curriculum. It seeks to give students the knowledge, skills and tools they will need for a successful work search. It also seeks to enable them to make the most of the learning experiences they will encounter during their co-op terms. Finally, I have chosen to add a vision for the development of not only workers but also work changers – for students to learn the critical analysis skills to review workplace practices and policies from a social justice perspective and effectively lead positive change. The educational vision for employers is not as evident. If the vision were to involve employers more fully
in the student preparation, this would have implications for curriculum format and delivery (e.g. invite employers to speak, have employers provide résumé and cover letter critiques, ask employers to participate in mock interviews, solicit employer contributions for content, etc.). There is some employer involvement noted in the Phantom Curriculum through the Student /Employer Panel, however the it would appear that aims of this panel are directed toward the students' goals rather than the employers'. If employers indicated an interest in learning more about the students they were about to hire, such an educational vision would be addressed differently through activities such as a seminar for employers on “Characteristics of the Millennial Student”, or a panel of students that employers could listen to and question. Similarly the educational vision for the institution is not at all evident in the Phantom Curriculum. It seems a missed opportunity for co-op programs not to consider educational goals for staff and faculty when conceiving a preparatory curriculum. Co-op staff need the professional development opportunities to stay abreast of the latest teaching and learning techniques for facilitating experiential learning, while faculty might benefit from better understanding co-op students' learning experiences and considering how they might incorporate some of them into classroom activities. Stakeholders in the preparatory curriculum could even be extended to include parents (particularly given the high levels of parental involvement with this generation of students) and some curricular elements could be added to help orient parents to the co-op process, set appropriate expectations, define roles, and address concerns. This is especially relevant for students whose co-op placements will
take them out of town, the province, or the country and for parents of students from various cultural backgrounds whose levels of parental autonomy vary. While not part of any traditional co-op preparatory curriculum that I have seen, considering the preparation of key stakeholders such as employers, faculty, staff, and parents as part of the preparatory curriculum could greatly assist in helping meet other co-op program goals and reduce problems that arise due to misinformation and inappropriate expectations. This expanded notion of the co-op preparatory curriculum could also serve to re-engage faculty and employers in an educational context in hopes of re-capturing some of the connection-making activities that were so prevalent in the original Schneider syllabus.

The cultural examination in Phase 2 of the co-op analytic framework then begins to explore the historical forces, ideas, and events that have influenced the curriculum to date. Chapters Three and Four of this thesis provide some historical context for the development of both co-op programs and their curricula. The preparatory curriculum in most cases has developed in a more evolutionary fashion, adjusting its content and delivery in response to shifts from critical stakeholders. In the inaugural years when the academic and industry partnership was first developing, distinct curricular elements were in place to ensure connections were made between the two (regular meetings between faculty and industry leaders, weekly meeting with students to help them connect their learning, class visits to industry, idea exchanges between industry and the academy, etc.). Over the years many of these learning-related practices have
disappeared and curricular changes have increasingly been driven by the changing needs of the workforce. When jobs became scarce in the Depression years, the nature of the work available for co-op students was broadened well beyond what was directly related to the students' studies and close partnerships were not developed with employers in those positions. In the War years when labour was scarce, women joined the co-op work force in unprecedented numbers, changing both the nature of the jobs taken as well as the workplace culture, though it is unclear whether, or how the curriculum of the time reflected this. In both cases practice and policy was driven by industry needs. More recently, co-op preparation has continued to evolve in response to the rapidly changing workplace, the expansion of co-op into less applied academic areas, and increased competition for paid work experiences from growing numbers of co-op programs and other work integrated learning models. Students have been taught to be more flexible and adaptable, to consider the learning benefits of positions that are outside of their academic area, and to adopt the employability skills and attitudes cited as important by employers. Increasingly, both as a way to assist with co-op job development and help students develop new skills, programs are encouraging students to find their own co-op positions. This again requires a significant change in the curricular content as "job search" and "job development" skills are added along with content including such topics as economic trends, labour market research, networking, designing a work search portfolio, etc. Additionally globalization has prompted the growth of international co-op programs and most preparatory curricula are struggling to adjust to the
significant new issues that come with sending students to work around the world. All of these changes place co-op in a reactionary position, largely responding to the changing employment environment.

Program expansion, job development pressures, and a rapidly changing global labour market have pushed co-op into areas not conceived of in the original model. The Phantom Curriculum is lagging behind such changes, at a minimum trying to provide the basic job tools to enable students to continue to be hired and opting to deal with the problems resulting from content and preparation "gaps" (e.g. incomplete pre-departure information for students working internationally, lack of knowledge and skills regarding navigating the workplace learning environment, insufficient skills and abilities to manage difficult ethical, moral, and social justice challenges in the workplace, etc.) at a later date. While it remains a primary intent of co-op to prepare students for the workplace, it appears that students and workplaces have changed much more dramatically than has the curriculum intended to support them.

The analytic framework now asks reviewers to consider any underlying beliefs about student needs, development, competencies, motives and interests so as to consider how these have, or should have, influenced co-op policies and practice. This is a particularly salient question for a program whose students come from multiple backgrounds and academic disciplines. As many programs (such as the Phantom) offer the same general preparatory curriculum to students regardless
of discipline, it becomes very difficult to conceptualize the needs, motivations, and interests of such a diverse group. Smaller more focused programs such as those designed for a class of civil engineers or pre-med students can likely create a more realistic profile, however this remains a challenge for many of the larger multi-disciplinary programs that, for quality control and economies of scale, choose to offer a general preparatory program for all co-op students. Given the significant influence students’ needs and motivations should have on curriculum design and development, a curriculum such as the Phantom which is designed for all students will necessarily lack some important features (e.g. specific résumé sessions for communication or fine arts students whose employers may look for different things than a business student employer, discipline specific interview sessions with sample questions from a particular field, country specific Workplace 101 preparation for students placed internationally, etc.). This content that acknowledges students’ needs and motivations must to be addressed through targeted sessions that complement the general preparatory curriculum. Students’ motivations for participating in co-op also present an interesting scenario. Many programs of study, particularly in engineering, have mandatory co-op. Students must participate in order to graduate and they have presumably opted for such programs at least partially due to the graduate placement success. For these students co-op is about bettering their employment options after graduation. For others, participating in co-op is a choice, and again gaining a “head start” on their careers is cited as a major reason for their participation (Grosjean, 2003). To add a conception of curriculum such as “developing skills
for critical analysis and change” to a co-op program whose students have career advancement as their primary reason for participating could be disastrous. Similarly to exclude such a conception of curriculum for students who envision their co-op experiences in a much more transformative light would be equally remiss.

The exploration of curricular culture continues with a look at the role of the teacher in the preparatory curriculum. In the case of the Co-op Phantom Curriculum, this could refer to many people -- peers, professors, co-op co-ordinators, and employers. The main teacher however of the Phantom Preparatory Curriculum is the co-op faculty or staff member. The expertise of individuals in this role varies considerably. Some are hired due to their industry knowledge in specific disciplines, others have career development and counselling backgrounds, and others may be academics interested in experiential learning. Few of these “teachers” have been trained as educators, though many have had experience leading workshops and giving talks. Most do not think of themselves as teachers in the traditional sense nor have considered their teaching style or how it relates to the material they cover. Most do not critically review the content they cover or question its aims and outcomes. Many co-op practitioners have not fully explored their roles as educators nor developed their skills in that area. With some basic knowledge regarding teaching and learning, co-op staff involved in the delivery of curriculum could better tailor their methods to the curricular aims e.g. use a transmissive approach for the delivery
of important administrative and procedural information, switch to a more transactional or constructivist approach when discussing case studies or workplace issues, and appropriately explore transformative opportunities with students as they present themselves. However as noted, co-op staff are not the only teachers of the Phantom Preparatory Curriculum. Students and employers participate on a panel regarding workplace expectations, students participate in mock interviews with their peers, and employers' perspectives and needs are invoked repeatedly throughout the curricular content. This broad notion of "teacher" that begins to play out in the preparatory curriculum can serve as an entry point for discussing the various forms that a teacher can take in different environments and open discussion regarding the differences between the school and workplace learning environments. Students can begin to experience how to learn from peers, external experts, and even themselves through reflection in and on practice – all attributes they will need in order to learn successfully during the work term.

The notion of success is also questioned at this point in the "cultural" review. How do we determine if the curriculum is successful? How are students assessed? In its simplest sense, success of the résumé and interview modules could be measured by the percentage of students that receive interviews and subsequent job offers. If the preparatory curriculum is primarily designed for this purpose, the most authentic assessment measures would be these. But what if students are successfully hired but generally perform poorly on the job and are
let go or receive poor performance evaluations? What if they persist at their jobs and receive good performance evaluations but do not feel they learned anything of value? Or worse, they dislike certain practices and policies at their place of work but feel totally unprepared and unsupported by their co-op program to take positive action towards remedy and feel the ultimate lesson learned from co-op was “never rock the employer boat”. Each of these scenarios relates to one of the three curricular aims stated earlier (get a job, learn from that job, and better the job environment). But the single most common measure of success of most co-op programs is only related to the first aim -- the number of students placed. In the immediate sense, résumés and cover letters are evaluated and approved by institutional staff, employers assess their merits and award interviews, and student interviewees are assessed again by employers and are either successful or not. Most of these measures are forms of authentic assessment and are most appropriate for the nature of this curriculum. But the noted measures assess only part of the curriculum (job placement), and there is much less regarding assessment of the learning and critical thinking goals that also comprise the preparatory curriculum. New, more authentic learning assessment tools also need to be incorporated into this curriculum in order to “value” the other conceptions of the curriculum currently not measured. Self- and peer-evaluations, assessment rubrics, portfolios, and journals are a few of the authentic assessment tools that may provide different but meaningful measures of overall curricular success.
It appears that there may be a disconnect between what the Phantom Curriculum aims to do and how it measures its success. Similar gaps may also be evident in the content of the Phantom Curriculum and these could account for the absence of some of the related assessment elements. What constitutes subject matter (and conversely what does not) can say a lot about what is valued by those responsible for such decisions. How it is organized and developed can provide similar insights. The co-op analytic framework begins by questioning what models of curriculum development have been used. In the case of the composite curriculum represented by the Phantom, this cannot be determined. As previously noted, most co-op programs have taken more of an evolutionary than systematic approach to curriculum development. Content has been added or dropped in response to perceived needs and available resources and the format has often tried to mirror academia. In the zero-based budget environments that characterize many of today's post-secondary milieus, this usually means that if something is added, something else is dropped or minimized, usually that which is most costly or has the least obvious negative impact on placement numbers. All too often these have been the curricular elements that served to connect the employer with the faculty or help the students connect their learning in both milieus. In many contemporary co-op programs for example, the face-to-face site visit component of the work term has been eliminated or reduced to phone or e-mail in order to cut costs, often with less than full attention given to the impact on the program's stated aims and intents. The Phantom Curriculum may well represent the results of this type of reactionary development as it represents a
distillation of the information and tools most critical to the job placement process, complemented by some content regarding workplace readiness, and minimal attention to student learning and development or connecting industry and academe for anything beyond the purpose of placing a student.

Regardless of the model of curriculum development used, the determination of what constitutes the subject matter has always been the responsibility of the institution. Co-op faculty and staff decide what content is important and make all decisions regarding the preparatory curriculum. But they do so strongly directed by employer feedback as evidenced throughout the Phantom Curriculum. References to “attributes employers seek” in the Workplace 101 module and “key performance areas employers look for” in the interview module, and a full class dedicated to an employer and student panel reflect the strong influence employers have on the content. The employers’ perspectives are not the problem but rather it is the dominance of these perspectives throughout the curriculum, perhaps to the exclusion of other content areas and points of view. If indeed co-op is designed to assist students with their transitions between school and work, it stands to reason that it should prepare students as best possible to ‘fit’ and ‘succeed’ in that world. But if it is also intended to help students become self-directed learners and active citizens of a democracy, this too must be reflected in the curriculum in some way.
There is also a definite need to add content to the Phantom Preparatory curriculum that better addresses and supports the co-op workplace curriculum. Subject matter pertaining to learning styles, skill and knowledge acquisition and transfer, the nature of the learning opportunities in the workplace, the changing role of the learner in different environments, the social and situated nature of learning, and the importance of reflection in and on practice would provide a good start. Only a few co-op programs in North America, notably the University of Cincinnati, Northeastern University, Antioch College, and Simon Fraser University, explicitly address workplace learning in this way with their students. Progressive programs also provide opportunities for students to interact with employers directly (in person and online) throughout their co-op careers, and embed reflection and metacognition exercises in all their preparatory materials and requirements. They specifically set out to help students make connections between the knowledge and skills they have learned in different environments through directed activities on site visits, return to work de-briefings, and greater integration of workplace experiences in the classroom. As more is understood about the co-op workplace curriculum through the work of Munby (2003), Chin (2004), Hung (1999) and others, implications of that research should be incorporated in the preparatory curriculum, wherever possible. The more that is known about the ways in which the powerful, emergent workplace curriculum unfolds and is interpreted by the learner, the better it is able to be supported before, during, and after the work term by the preparatory curriculum. Finally, it is clear from the research that students require significant prompting and practice in
order to successfully transfer what they know and can do from one environment to another. More explicit content regarding experiential learning theories and skill and knowledge transfer, along with more opportunities for practice using reflective tools and metacognitive activities is also required.

Adding content to address the third aim stated for the Phantom Curriculum (preparing students to be work changers) is a more complex undertaking. What new subject matter might be introduced to the traditional preparatory curriculum to help students understand and deconstruct their own experiences more fully? What new lenses must co-op students look through in order to see their world through different eyes? Before one can begin to think about changing workplaces there needs to be a broader understanding of why and to what end. Students would require exposure to introductory material on critical theory and opportunities to engage in discussions about its aims and philosophies. They would need to consider what a social justice agenda means to them personally and as a citizen of the world. Finally, they would need to determine whether they want to incorporate a critical agenda into their co-op agenda. The addition of such content is risky on several levels: 1. employers may see it as a threat, 2. students may have little or no interest in this type of material and may even find it counterproductive to their goal of succeeding in existing workplaces, 3. co-op faculty and staff may not share the vision of co-op as a vehicle for the development of such ‘work changers’ believing that if the model “ain’t broke, don’t fix it”, and 4. even if they did, few are sufficiently knowledgeable regarding
critical theory to be able to teach it and facilitate related discussions. It would appear to be a challenge for co-op that, without a passionate advocate, may be better left unexplored. But imagine for a moment a co-op curriculum that has a social justice sensibility. Not an extreme program designed to develop disenchanted future workers whose sole purpose is to critique and de-construct but one designed to ensure thoughtful workers, engaged both in their immediate work tasks all the while constructively contributing to the betterment of the larger organization. What curricular content would be required to meet such a vision? Once the basic theory was introduced, co-op critical pedagogy would also need to address the political, economic, and social realities that shape the workplace and the workers therein. This could include topics regarding occupational health and safety, progression and promotion, the different roles of unions and management, work-life balance, and worker rights and responsibilities. It could include the examination and analysis of the policies and practices that surround these issues with a more critical eye. More detailed analyses of workplace practices, particularly as they pertain to the disenfranchised and minority groups, could be included through case studies focusing on issues of gender, race, sexual orientation, etc. The 2004 publication “The Corporation: the pathological pursuit of profit and power” could serve as an excellent contemporary reference and source of rich, often Canadian-based, material. Clips from the affiliated film and/or television show could provide interesting ways of engaging students in thoughtful discussions about the sustainability of a system that places profit above humanity and the environment. The challenge would be to help students
recognize the flaws in such a system all the while exploring practical and palatable opportunities for change. Perhaps the best way to introduce a critical pedagogy to co-op would be to pilot it in a discipline that already embraces these themes and with employers interested in hiring workers with these critical perspectives and interests. It would, for example, be exciting to add such a dimension to a public policy or resource and environmental management co-op program as these themes could resonate strongly with both the students' personal, academic and workplace interests.

Perhaps the lack of such content is the result of a curriculum that is supporting only the most basic conception of co-op – placing students in workplaces. Perhaps that is because it is the only conception of co-operative education that has been clearly articulated and supported by accreditation and professional bodies and understood by most practitioners. The lack of this content may also be the result of a curriculum that has not been developed in any systematic way but rather has evolved in response to outside pressures, most notably from employers. Or it may be that such content is beyond the scope that most programs feel capable of delivering, both philosophically and in terms of resources. Whatever the reason, the co-op Phantom Curriculum reflects a co-op placement curriculum more than a co-op education curriculum, something that should be concerning to a program constantly struggling to legitimate itself within the halls of higher education. What knowledge is valued and what is not is very telling and the employer-driven content of the Phantom Curriculum provides a
sign to co-op leaders that some balance may need to be re-stored between the job placement goals of the curriculum and its other curricular aims.

Upon completion of the Phase 2 examination of the culture of the Phantom Curriculum, the analytic framework asks reviewers to re-state the purpose(s) or conception(s) of the curriculum to ensure internal congruency and to identify the primary stakeholder of the curriculum. The primary stakeholder for the Phantom must be the student as the entire curriculum is directed at their preparation and placement, but it is arguable whether they are the primary beneficiary. After consideration of other conceptions of curriculum presented in Phase 2, the singular conception of the Phantom Curriculum as “preparing students for work” was extended to include the conceptions of “preparing students for lifelong learning” (beginning with the workplace) and “developing a critical consciousness”. These expanded views of the curriculum broadened the subsequent discussion of the culture of the Phantom Curriculum, raising several issues, particularly in terms of content gaps.

With the cultural analysis of the Phantom providing the background context, the framework moves to Phase 3, and the analysis of the Phantom Curriculum’s Résumé Module. This is arguably the most universal element of any co-op preparatory curriculum. It is a requirement of all co-op programs and is a key deliverable of the preparatory process. Successful completion of this module is
required for student to continue in the co-op job search process. The Phantom Résumé Module is detailed in below:

**Résumé Module: Outline**

**Goal of the résumé:**
- as a job search tool -- its role to get you an interview, formats employers like and don't like, desirable employability skills

**Components of a résumé:**
- cover page, header with contact information, education, skills, work experience, activities and interests, references, and transcript (standard template provided)

**Determining résumé content:**
- matching your experience and skills with those desired in your field, sample résumé verbs and accomplishment statements for various jobs and fields, sample transferable skills that should be noted, self-analysis of strengths and weaknesses, practice writing personal accomplishment statements and résumé phrases

**Résumé format and layout:**
- functional, chronological, hybrid and electronic format presented, samples and comments regarding preferences by employer type and field, sample discipline specific résumés provided.

**Professional image and style:**
- notes and discussion regarding expected standards

**Résumé Do's and Don'ts:**
- learn what employers love (and hate!) to see on résumés.

Again the framework guides reviewers though a series of questions (see Appendix 3) that reflect multiple ways of "seeing" this element of the curriculum. The following discussion is the analysis of the Phantom Résumé Module, beginning with a look at its aim.
Phase 3 of the Analysis: The Résumé Module

The purpose of the Résumé Module is fairly straightforward in the Phantom Curriculum. It is intended to ensure that students obtain the information necessary to create a résumé that will meet with success in terms of securing co-op interviews. There is therefore a fairly strong emphasis on basic information transmission regarding recommended résumé styles, formats, and content. There is also some development of students' thinking skills in this exercise as students are directed to consider their own skills in the context of their employment goals and to draft related "accomplishment statements". Overall however, the module is fairly information and template heavy, and didactic in its style. There is no critical pedagogy component of the Résumé Module, nor any real focus on transferable knowledge or pedagogical efficiencies. Its primary purpose is to ensure students produce a résumé that will yield them co-op interviews and as such is a critical curricular component with respect to supporting the Phantom's primary program goal of optimizing co-op placements. Given its utilitarian and directed mission, it is perhaps not surprising that the main delivery format is through lectures and prescriptive feedback. This is consistent with the transmission orientation described by Miller and Sellers (1990) and is quite effective for information transfer purposes. This assumes a relatively passive role for the student, placing the "teacher" in the position of content expert. In the case of the Résumé Module, the curriculum teacher is often
relaying information and tips from the unseen "teacher", the employer. As such, much of the expertise and curricular content for this module is derived from employers. The module does offer some opportunities for students to engage in discussion regarding résumé styles and employer expectations but overall there are few constructivist or transactional types of activities where the learners formulate their own interpretations of the information and make decisions based upon their determination of standards. There is also no evidence of peer feedback provided, and the final decision regarding the acceptability of the end product rests with the co-op co-ordinator.

Had the Phantom Résumé Module chosen to focus more on the students’ developing a sense of their skills and goals and how those might best be showcased in a résumé, the content and format would have been quite different. More transactional, and even transformational, ways of knowing would have been incorporated including collaborative and co-operative work with others (peer reviews and critiques, group problem solving), more discussions drawing on each person’s experiences, and more reflective practices used in the selection of content and creation of the accomplishment statements. It is unlikely that as many of the templates or sample résumés noted in the Phantom Résumé Module would be used in a curriculum that focused on encouraging students’ thinking, reflection, and knowledge construction. Students would be encouraged to review and critique each other’s résumés providing feedback to their peers while gaining perspective regarding the adequacy of their own résumé. In this
scenario students need to have understood the purpose of each section of the résumé in order to take an employer's perspective in the critique. In reviewing multiple résumés from peers they would begin to get a sense of what an employer sees when they receive a package of fifty résumés and the experience of critiquing them again allows them to see through "employer eyes" how a minor typo or grammatical error looks against thirty others with no such errors. Instead of the teacher serving as the expert and giving final approval of the finished product, students would be encouraged to submit their résumés for the placement process only once they were satisfied that it met their standard – one for which they would now have a much better context within which to make that judgment. When thinking and learning become the focus versus the résumé itself, the module changes dramatically, although a résumé still results. In such a case, the process (self-reflection and projection, student construction of meaning, peer feedback and group work) becomes a means to an end (the résumé). The thinking that is done in developing a résumé (reflecting on own experience, contextualizing that with respect to employer needs, evaluating self in comparison with peers, knowledge of personal and professional strengths and weaknesses and how to address them both in a work search context, etc.) is foundational in the student beginning to know themselves in relation to their co-op goals and their peers. This thinking is transferable to other employability "ends" such as the creating a cover letter or preparing for an interview. If students actively engage in a résumé development process versus a "fill in the
template” process, the experience will provide a base of self-knowledge that they can draw from throughout their co-op placement activities.

In its current state, the Phantom Résumé Module is designed for the efficient production of a résumé with templates, sample résumés, suggested résumé verbs and phrases etc. provided. It is approved by the teacher “expert” and once completed, students move to the next project of cover letter writing or interview preparation with little transfer of learning since the résumé module was directed purely at the end product versus the thinking behind it. If the primary aim of the Phantom Curriculum was student learning and development versus job placement, the suggested constructivist approach would be more appropriate. As it stands, the Phantom Résumé Module supports the primary aim of the Phantom Curriculum (student placement) and in that sense the transmissive and directive approach taken and the use of templates and suggested résumé phrasing is congruent with that particular curricular goal. However, as noted above, the process could be much richer in terms of student learning.

The framework now moves to the assessment of the résumé module, which presents an interesting scenario in that there are two summative assessments of the résumé, one traditional and the other authentic. In the Phantom Résumé Module students are instructed regarding acceptable and expected professional standards for the résumé. Samples of good (and sometimes poor) résumés are provided to students, often discipline or sector specific. Students are encouraged
to follow the instructions and tips provided and produce a résumé that meets the co-op program's standards of acceptability. Each student’s résumé is assessed by a co-op staff member, prescriptive feedback is provided, and the student is asked to make the changes and re-submit. Once the résumé is approved by the co-op program, the student is permitted to continue in their co-op job search. This reflects the more traditional, institutionally controlled approach to assessment. For co-op students however, a very authentic assessment soon follows. Their résumés are sent as part of application packages along with others from their own institution and from other institutions. The co-op employers then assess each one and decide which merit interviews and which do not. The competitive circumstances may vary but the feedback to the student is clear – his or her résumé either met the employer’s standard or it did not. If multiple résumés are sent out and few or no interviews result, students can deduce there is likely a problem with their résumé and seek the corrective assistance noted in Week 10 of the Phantom Curriculum.

This dual assessment situation provides an early example of the distinctions between the two worlds of school and work. The discrepancies could be made explicit to students and used as a jumping off point to a broader discussion regarding the differences between the school and workplace learning environments noted by Munby et al. (2003) in Chapter Five. The dual assessment (institutional and authentic) could also serve to illustrate the gap that often exists between theory and practice. A student’s résumé may meet the
theoretical standards required by the program yet be completely inadequate in terms of garnering interviews. Roberts (1980) talks about a *theory-practice interface* within which informed eclecticism operates in order to develop a rich conception of an entire event, one where theory and experience inform each other. In the case of the résumé meeting academic standards but failing in practice to yield interviews, the event can be viewed through multiple, equally valid lenses. The résumé may have met professional standards but the competition that term was extreme due to the addition of the new technical university’s co-op applicants who, comparatively speaking, had more relevant skills. Or, the résumé met professional standards but the student was selective and failed to apply to very many positions so few interviews resulted. Or perhaps the resume met “old” professional standards as the co-op program failed to stay abreast of changes recently made in the sector. Each of these is a possible theory for why the student is not receiving many invitations for interviews. The more interpretations of the event that are possible, the more solutions may be found and the greater the ability to select the best one for the given circumstances and take appropriate action. In a curriculum where learning is the focus, making these negotiated interfaces explicit to co-op students who will be regularly moving between theory and practice could be very useful in helping them understand both the current event and any future such events.

Many people believe that the true test of whether something has been learned or not is whether it can be effectively used in a new, but related context. In this
context a true measure of the Résumé Module could be the extent to which what the students learned through it informs the subsequent cover letter and interview preparation modules (new but related contexts). Such as measure is unlikely to be formally carried out but such transfer could be promoted by making the learning process explicit and adding some transfer-related content (near and far transfer, conditions for transfer, prompting transfer) and activities (reflection and metacognitive exercises, opportunities to practice, specific prompts regarding upcoming exercises) to the existing module, particularly if the content were also to include the more learning-focused approach to résumé development.

The analysis now moves to an examination of the subject matter covered in the Phantom Résumé Module. As previously noted, the syllabus outlines a fairly compact set of material that results in the production of a co-op approved résumé for each student. The main topic areas (determining résumé content, résumé format and layout, professional image and style, and résumé do’s and don’ts) and activities (résumé submission and approval) cover standard subject matter using a fairly directed, “how to” approach. Learning outcomes are not specifically noted for the module but clearly the résumé itself is the major deliverable. With respect to any missing content, the Phantom Résumé Module is fairly complete if it is designed solely to provide one of the tools necessary to support the curricular goal of placing students. If however it is also intended to support the second conception of the Phantom Curriculum – that of developing student thinking and learning, it would need to be substantially re-designed as discussed
earlier. In the re-designed module, the résumé would be positioned as one of many employment-related communication tools and activities including the cover letter, interviews, networking, etc. The focus would be on the thinking behind the tool itself. Subject matter would need to focus on such topics as: What do I want from this tool or activity? Who is my audience? What are their needs and expectations? What are my strengths and weaknesses with respect to their needs and my goals? And how can I best meet their expectations with my experience using this tool or activity? Again the focus is on the process of the students determining how to best position their skills and knowledge for a desired outcome using a particular employment-related tool such as a résumé or cover letter, or engaging in employment-related activities such as interviewing or networking. This approach requires much more self-reflection on the part of the student as well as assuming different stakeholder perspectives, and ensures they have a solid base of self-knowledge prior to learning about the various employment tools and their particularities. Such a knowledge base would serve students well as they progress in the co-op placement process, ultimately entering the workplace more aware of their strengths and areas for improvement, more articulate in addressing both, and better able to set learning objectives that relate to their current and desired skill sets. This process also presents an opportunity to explicitly discuss and practice the skills and knowledge transfer as the students assume different roles, one of the expected learning outcomes of co-op that is not well supported by the Phantom Curriculum. Students could be made aware of the thinking processes in which they are engaging and prompted
to think about other aspects of the job placement process where this knowledge could be useful. With the deliverables (cover letters, résumés, interviews) presented as communication vehicles rather than the actual message, students learn to shape the content and presentation of their material to the given activity or tool. The managerial control they experience in such activities sets the stage for the self-direction they will need to exercise regarding their learning and communication during the work term. It also presents one more occasion to practice transferring and scaffolding their learning from the résumé activity to the drafting of a cover letter or preparing for an interview.

The Phantom Résumé Module does not contain any content related to the development of a critical perspective or leading change. The goal of this module does not lend itself well to the inclusion of such content given that a key outcome is to have a résumé that meets the standards and expectations of current co-op employers. This presumes that these employers offer desirable employment placements which the students are eager to secure. It is possible to add a discussion regarding characteristics of workplaces that students find undesirable and why. Should any of these apply to co-op workplaces, those students could discuss the positions to which they would not apply and perhaps explore the option of a self-directed work search in order to find an experience that better meets their expectations. Co-op co-ordinators may also learn important information regarding shifts in student interests and motivations through such a discussion. However, adding a true critical pedagogy to the résumé development
module appears to be challenging given that the two conceptions of curriculum are so different and in the case of developing a résumé, potentially conflicting.

The final area for consideration related to content of the module is one of situating the résumé within the contemporary job search environment. With such rapid change being experienced in the workplace, it would be surprising for the same job search procedures and tools used fifty years ago to be relevant today. The Phantom Résumé Module does not address this other than through the relaying of what one hopes are current employer expectations. It would be useful to update the Phantom Résumé Module with respect to some of the major changes in the co-op landscape noted in Chapter Three. The economy has shifted from an industrial base to an information base and the use of technology has mushroomed. Many job search processes have moved completely online and electronic résumés are being increasingly requested over traditional paper résumés. These résumés have slightly different format and content considerations and are often accompanied by links to an electronic portfolio or web page. The paper résumé is largely a historical document, outlining what the applicant has done in the past in the hope that an employer will see how those experiences might fit their needs. On the other hand, e-portfolios are live documents that showcase, in multi-media, what the applicant has done, is doing, and often what they plan to do. It is a future oriented complement to the résumé, providing proof of the accomplishment statements found in the résumé's account of the applicant's work history. Additionally, as the co-op model expands beyond
the applied disciplines, résumés are becoming increasingly diverse. A fine arts or marketing résumé may indeed have components that are considered inappropriate for an engineering or science résumé (e.g. graphics, catchy wording, creative use of space and materials, etc.). A generic résumé development module such as that represented by the Phantom will require a growing number of exceptions or complementary targeted sessions as mentioned earlier, to better reflect the diverse areas in which co-op now operates. Finally, résumés developed for international employers may also need to be tailored by country, sector, etc. with specific content regarding culturally relevant résumé etiquette and expectations provided.

The Phantom Résumé Module has sufficient content to meet its most utilitarian purpose at the local level. In order to realize goals regarding student learning and development a significant shift would need to occur in terms of both content and format. The Phantom Résumé Module could also benefit from contemporizing the role of the résumé and its format with respect to technological advances in communication as well as an updating and addition of content reflecting and supporting the diversification and globalization of co-operative education.

The notion of introducing a critical pedagogy to this particular element of the curriculum may be incommensurable with its primary purpose. Many powerful beliefs, values, and assumptions underlie the conception of curriculum as "preparation for work". These emphasize the development and success (in
materials terms) of the individual over the development and success (in social justice terms) of society. A module whose primary purpose is providing a tool for personal success may find the introduction of a different and potentially conflicting agenda confusing and counter-productive to both aims. The power of this unspoken curriculum, however, should not be overlooked.

The intent of the Phantom Résumé Module is fairly straightforward – to help students produce an “industry standard” resume. This outcome is part of a larger process of securing a co-op job that is itself embedded in the students’ greater goals of enhancing their career prospects. There are many layers of assumptions and beliefs underlying this scenario. At the most local level, it assumes that co-op jobs are good jobs and co-op workplaces are desirable places to work. It also presumes that competition is fair and that the “best person for the job” will be offered the job. To this end, it encourages all students to try to be the best person for the job by following the prescribed process and attending to what employers have outlined as the important skills, knowledge and attitudes for success.

Students’ participation in co-operative education is often based upon the belief that doing so will “jump start” their careers and open the doors to better employment prospects upon graduation, much of which has been born out in the co-op research. The notion of enhancing one’s employment success is itself firmly rooted in some of the most basic premises regarding contemporary North American culture: 1. that success is measured in material wealth; 2. that work has moral significance and good workers demonstrate thoroughness,
promptness, reliability and punctuality; 3. that the free-market system is the most effective economic system; and 4. that economic and technological trends are unchallengeable and cannot be controlled (Joseph et al., 2000, p.32). These are the hidden or silent messages underpinning a co-op curriculum such as the Phantom. They may never be made explicit or discussed, but are quietly passed along to successive generations of co-op students nonetheless.

In addition to the values and beliefs underlying the Phantom curriculum, there are many widely held beliefs at the societal level regarding the role of the school in support of this culture of curriculum. First is the view that schools play a vital role in a country (or even the world's) economic future. If this is the case, then it follows that business, government and industry leaders should assist schools in this role by telling them what future employees will need to know and how they will need to behave in order to effectively contribute to this agenda. In such a world, which is arguably upon us, the Phantom Résumé Module is appropriately driven by employer needs and expectations. There is also the belief that schools can somehow help restore social and economic inequities caused by the free market economy and uncontrollable economic trends. In this context schools play a vital role in the economic well being of a country, and business, government, and industry leaders play a vital role in education. In this scenario, learning is for the purpose of training young people to participate in the current system. They are educated to "know the world as it is, not to improve it or even deeply understand it" (Joseph et al., 2000, p.33). This is increasingly reflective of the
world from which the Phantom Preparatory Curriculum is derived and in which the co-op model continues to grow.

This loss of educational autonomy to the service of the economy is a growing fear of many educators. The emphasis on work and the need for future workers contrasts with a wider curricular vision of developing in students the “economic, social, and cultural relations that (will) shape their sense of what is possible and desirable” (Simon & Dippo, 1992. p.123). In Chapter Five I presented an argument for the introduction of a critical pedagogy to the co-op preparatory curriculum and suggested possible entry points. While the résumé module may not be the best place for such an introduction, the idea of students not only learning to work but about work remains a valid one. The challenge of blending these two very different cultures of curriculum is, however, significant.

In the final portion of Phase 3 of the analysis, stakeholder participation in the development, delivery, and assessment of the résumé module is questioned. It is fairly clear that the résumé module has three key stakeholders: the institution, the employers, and the students, the latter having been previously identified as the primary stakeholder of the Phantom Curriculum. The extent to which each contributes to the Résumé Module varies but there is no question that the employers’ perspectives are the most powerful. They determine what is valued in terms of the module content and they provide the ultimate assessment of the résumés through their screening processes. In some cases, though not the
Phantom's, employers come to campus and directly deliver the résumé module to co-op students. Their feedback is sought through surveys, informal discussions, advisory councils, and the monitoring of industry trends in order to ensure that curricular content meets their expectations and needs. They are without question the strongest voice in terms of the Résumé Module's content and assessment.

Curricular delivery decisions remain within the jurisdiction of the institution and in the Phantom Curriculum, as we have discussed, a fairly efficient and traditional format has been chosen. Students do not play a significant role in any of the curricular decisions for the Phantom Résumé Module. Given the discussions regarding the primary aim of the Résumé Module and Phantom Curriculum, the employer focus is not surprising. Employers have the ultimate power over the success or failure of the main curricular objective -- placing students. In this sense, curriculum developers would be remiss to exclude them from the process, and wise to engage them to the greatest extent possible. The question is less about the validity of employer involvement and more about the extreme dominance of one curricular aim (or commonplace) over another. In this case, the Phantom Résumé Module exclusively focuses on the aim of creating a résumé that will garner the student an interview. If this were the only aim of the curriculum, the dominant role of the employer would be understandable. However, the Phantom Preparatory Curriculum is also intended to help students prepare for the different learning they will encounter in the workplace and to gain
managerial control over that learning. As noted in earlier discussions, dramatic changes are required with respect to content and assessment in order to meet these educational outcomes. Included amongst these changes would be a much greater engagement of students in the design (e.g. student surveys regarding content students want covered), delivery (e.g. peer résumé reviews and feedback), and assessment (e.g. student approval of the final version of his or her résumé) of the module. With the availability of the web, it is conceivable that the face-to-face time spent with students could be directed at addressing their specific needs and interests, while the more prescriptive résumé construction information currently covered by the instructor could be accessed on the web at any time.

Summary of Résumé Module Analysis

The analysis of the Phantom Résumé Module provided the opportunity for much discussion that extended well beyond a review of résumé building content. The framework sought to gain a greater understanding of the purpose of the module within the preparatory curriculum and co-op program as a whole. In so doing, it became apparent that the Phantom Résumé Module predominantly supports one of the three aims of the Phantom Preparatory Curriculum. It is designed to ensure students develop industry standard résumés that will earn them co-op interviews, and hence co-op placements. The other two aims of the curriculum, developing student learning and transfer skills and introducing a critical pedagogy, are largely unattended to in this element. With its singular focus on
the placement process, it is not surprising that the employers' perspectives dominate the Phantom Résumé Module. Its delivery is one of efficiency, largely using transmissive teaching methods to ensure students receive all the information they need to draft their résumés. In order for the module to address the secondary aims of the Phantom Curriculum, new content needs to be added regarding self-directed learning and transfer as well as updating of the current information to better reflect the significant changes in the co-op landscape noted in Chapter Three. The assessment in this module takes place on two levels: the traditional teacher approval or non-approval of the submitted résumé and later, a more authentic assessment by employers who assess them to shortlist for interviews. The framework promoted a deeper understanding of the dominant “training for work” culture of this curricular element and in so doing exposed the hidden curriculum that underpins this culture. This exploration raises many questions regarding the overall conception of co-operative education and the notion that co-op may be at risk of becoming, or being viewed as, a tool in the reproduction agenda of the external business, industry and government communities.

*Recommendations for the Phantom Curriculum and Résumé Module*

Three conceptualizations of the Phantom Curriculum were proposed. The first (developing the skills and tools needed for a successful co-op job placement) is met reasonably well by the Phantom Curriculum. The second and third conceptualizations of the Phantom (preparing for workplace learning and
developing critical analysis skills and tools) are poorly met in the overall curriculum and in the Résumé Module in particular. Clarity regarding the Phantom Curriculum's primary educational vision is needed. The extent to which the Phantom's curricular purposes align with the overall program purposes (only partially posited for this analysis) also needs to be further reconciled through a re-conceptualization of the Phantom Co-op Program, the Phantom Curriculum, or both.

As a result of the analysis several recommendations emerge regarding design, content and delivery, many of which are related to the unmet second and third conceptions of the Phantom Curriculum. The following recommendations apply the Curriculum in general. These are followed by recommendations specific to the Résumé Module.

For the Phantom Curriculum it is recommended that:

1. specific content be added to address workplace versus school learning and skill and knowledge transfer, as well as implications of both for the learner. In addition to the subject matter, design elements should be added that allow the learners to experience the difference between the two environments and practice learning and transferring across multiple contexts.

2. curriculum deliverers and developers understand the history of co-op and the influences on its growth and development so that they may better "educationally situate" contemporary co-op for the learners. Co-
op curriculum developers and deliverers also need to fully appreciate the complex and dynamic environment in which the current program operates (see Chapters Three and Four) and reflect that in the curriculum.

3. curriculum deliverers better understand basic principles of adult learning and curricular orientations and re-evaluate their teaching styles, curricular content, format and assessment, and incorporate these new understandings of teaching and learning.

4. curriculum developers reconsider whether, how, and where to support the third conception of curriculum suggested in the analysis: developing critical analysis skills for constructive change. If it is to be included, it needs to be represented in both content and format throughout the curriculum.

5. there be greater student engagement at all stages of the design and delivery process. Students especially need to be consulted regarding their motivations and goals of participating in the co-op program and need to play a much greater role in their own learning and assessment (self-direction) throughout the curriculum.

6. more authentic learning and assessment tools be incorporated in to the Curriculum including self- and peer-assessments, discussion groups, portfolios, journals and blogs, rubrics, etc.

7. all key stakeholders' perspectives need to be represented in a balanced way throughout the curriculum, while ensuring that the primary stakeholder's (in this case the students') educational needs are at the centre of the curricular development.
For the Résumé Module it is recommended that:

1. the key purposes of the module be clarified and supported throughout the module (e.g. to develop skills and tools for co-op work placement process and prepare for workplace learning but not to develop critical analysis and change skills).

2. the extent to which employers' perspectives dominate this module be examined with respect to its overall educational goals and a balance of stakeholder interests is achieved.

3. the content be updated to reflect the contemporary résumé environment (e.g. e-résumés, e-portfolios, employability skills profiles, workplace trends, etc.).

4. the way in which the module is delivered be changed to focus on the thinking behind developing a résumé (the student's skills and goals, the employer's needs, and how best to bridge the two and communicate this) and how to transfer this thinking to other employability preparation such as developing cover letters, preparing for interviews etc.

5. additional "targeted" résumé modules be developed for preparing special interest groups (e.g. international students and those working internationally, students from specific disciplines, students looking to work in specific sectors, students wishing to conduct their own work searches, etc.) and offered as complements to the general module.

6. greater peer and self-direction is incorporated into the delivery and assessment of the module.

7. the module begins the conversation regarding the differences between school and workplace learning and that this thread is carried throughout the entire Phantom Curriculum.
Chapter Summary

A four phase analytic framework for co-op is proposed beginning with the identification of the co-op curriculum for review and an examination of that curriculum's culture. This is followed by the analysis of an individual curricular element and ends with the identification of issues and recommendations for the overall curriculum and the specific element analyzed. The framework situates the curricular analysis within the context of the overall co-op program's goals and the analysis of the curricular element within the context of the overall curricular aims. The analytic framework, comprised of elements from various curricular frameworks from the literature, provides a multi-focal view of co-op curricular events, extending more traditional analyses beyond a simple evaluation of curricular aims versus learning outcomes. Underlying values and beliefs are challenged and hidden and null curricula are explored. The resultant discussion reflects the multi-focal perspectives evoked by the framework questions ultimately providing a more holistic understanding of the curriculum and, at times, challenging the very concept of the program it is intended to support.

In order to "test" the framework, a Phantom Curriculum was designed -- a composite of several co-op preparatory syllabi from leading co-op institutions in North America. From the Phantom Curriculum, the Résumé Module was selected for individual analysis. Several recommendations for the Phantom Curriculum emerged from the test analysis. Many revolved around ensuring congruence among program, curricular, and modular aims and ensuring that stated
educational purposes are supported throughout the curriculum. Other recommendations involved the addition of content and activities, particularly in support of preparing for workplace learning, and skill and knowledge transfer as well as to contemporize and contextualize the program elements. A balance of stakeholder perspectives across the curriculum is suggested and more student engagement in all phases of the design, delivery, and assessment is also recommended.

Much discussion and several recommendations resulted from the "test" analysis of the Phantom Curriculum and Résumé Module. The framework pulls together many different ways of thinking about curriculum and provides a way of considering how the various co-op curricular elements and events work together in support of a common educational purpose. Chapter Eight brings the study to a close with a review of the major conclusions regarding this inquiry and the Co-op Analytic Framework, a discussion of the limitations of the study, and a look at implications for future research and practice.
CHAPTER EIGHT: REVIEW, LIMITATIONS, AND IMPLICATIONS

Review

In this thesis I have identified several theoretical perspectives regarding learning [including Kolb (1984), Lave and Wenger,(1991), Schön (1983), Hung(1999), Munby et al. (2003)] and curriculum [including Miller and Seller (1990), Eisner and Vallance (1974), Joseph et al., (2000)] that serve as the foundation for the development of an analytical framework for co-operative education curriculum. The various assessment components of the analytic framework were brought together using an approach of informed eclecticism (Roberts, 1980). This has resulted in the development of a multi-phase, multi-focal framework for assessing co-op curricula and events of practice. This framework was then applied to a selected curricular element from a composite co-op preparatory curriculum that I created and entitled the Phantom Preparatory Curriculum. This is a hypothetical yet representative curriculum that precludes discussion of program particularities, and avoids having to critique (or defend) any one co-op program’s curriculum allowing for a more open analysis and discussion. From the analysis, several recommendations for the Phantom Curriculum were presented for discussion.
Through the process of this inquiry, several direct contributions to the field of co-op research have resulted. I have proposed a definition of the co-op curriculum that encompasses three distinct categories: the co-op academic curriculum, the co-op preparatory curriculum, and the co-op workplace curriculum. This helps clarify the multiple meanings of co-op curriculum that have until now been represented as one in the research literature. I have also provided an historical overview of the co-operative education landscape highlighting some of the important environmental factors that have influenced the development of co-operative education and that affect the continued development of the contemporary model and its curriculum. This inquiry also served to highlight particular theoretical perspectives and conceptualizations of co-op learning and curriculum that both inform the model and ground the framework for analysis.

The Analytic Framework is a tool specifically designed for co-op that may be used to explore co-op curriculum in ways that extend well beyond what is traditionally conceived in a curricular review. It includes a critical exploration of the curriculum’s, and often the program’s, philosophical and theoretical underpinnings. The Framework questions challenge the underlying beliefs of both the curriculum in question and the overall program for which it is designed; questions that may, in some cases, lead to a significant re-conceptualization exercise. The Framework stimulates discussion and debate rather than defining specific curricular content format and assessment elements. It sets out to ensure
the thinking behind the curriculum and seeks congruence amongst a program’s aims, activities, policies and assessment practices.

The analysis process presents an opportunity for co-op professionals to re-examine co-op goals, practices, values and beliefs by considering how new understandings regarding teaching, learning, curriculum, and the changing co-op environment all impact on the contemporary co-op curriculum. The Framework questions are designed to reveal the implicit and hidden curricula and in so doing raise the difficult but important subject of co-op’s role with respect to the development of actively engaged, critical citizens of the world. The Co-op Analytic Framework extends the traditional review approach to get to the why of curriculum, not just the what and how.

This thesis has generated many researchable hypotheses regarding learning and the role and value of the curriculum in co-operative education. Additionally, practitioners may benefit from this work and the questions it raises in ways that motivate and challenge them to explore their own curricula, further refine the framework, and begin to more broadly consider a contemporary model for co-op and its curricula. Implications of this work for both research and practice are discussed in further detail later this chapter.
Limitations of this Study

A conceptual analysis, such as was used in this inquiry, allows the reviewers to examine implicit features of a curriculum and to begin to explore the assumptions and beliefs that underlie that curriculum. Such a methodology is consequently highly specific to the curriculum in question, and as such the study findings are not readily generalizable to other co-op curricula. Additionally, in this inquiry a Phantom Curriculum was developed to test the Framework. This Phantom Curriculum is a hypothetical composite of several co-op preparatory curricula, so discussion and findings regarding it are also limited to the Phantom itself. Also, using an analytical framework that is based upon multiple other conceptual frameworks adds a level of abstraction that could bring into question the validity of the exercise. However examining current curricular practices through “several coherent models and frameworks provides the examiner the opportunity to gain a much deeper understanding of the work than would examination from a single perspective.” (Joseph et al., 2000, p. 25)

As designing an analytic tool that would lead to a greater understanding of the co-op curriculum was a key objective of this inquiry, the multi-focal framework design and hypothetical curricular materials, though limited in their generalizability, served this purpose well. The Phantom Curriculum allowed for an un-biased and less value-laden analysis than a curriculum from a particular program that necessarily comes with all its contextual history. Using no particular co-op program’s curriculum, yet one to which every program could relate,
enables a conversation to start among co-op developers and deliverers that begins at a conceptual level, without threat to any particular program or curricular approach. The Co-op Analytic Framework provides a place to compare and contrast, contemplate co-op curricular and program goals, consider critical environmental influences on the curriculum, envision an ideal state, and question whether the activities undertaken by co-op curriculum developers and delivers are congruent with our visions as educators. It enables the examiner to see the inter-connectedness among various elements of curriculum and to deeply consider the ultimate educational aims of that curriculum. Ultimately the co-op analytic framework aims to encourage us to ask “what is the purpose of curriculum and how does our curricular work ultimately contribute to the education of the individual and to a good society” (p.26). These are, arguably, the two most important goals of any curricular analysis.

Implications for Research

Extending this Research

One of the issues that needed to be resolved in this study was clearly defining the co-op curriculum. With so little research specifically related to curriculum in co-op, it was even more frustrating to realize that the studies that do exist have no shared definition of the co-op curriculum. It was therefore very difficult to compare and contrast findings or get a sense of the state of the field, much less consider how to effectively contribute to it. In response to this, and based upon an inductive analysis of the literature, I describe three distinct categories of co-op
curricula: the academic, the workplace and the preparatory. The focus of this study was the preparatory curriculum and the framework presented was designed with this curriculum in mind. By extension it would be very interesting to explore the applicability of the Co-op Analytic Framework to curricular elements from the other two co-op curricula: the academic curriculum and the co-op workplace curriculum. Selected co-op elements from the workplace curriculum such as professional development activities, work term reports, the employer evaluation, and the site visit could be analyzed using the Co-op Analytic Framework as could particular courses, labs, etc. from the academic curriculum. By analyzing each of the three curricula related to a given co-op program, analysts would gain the most comprehensive view of a co-op curriculum enabling them to make recommendations that consider the overall co-op curricular experience. In this way one could also explore the extent to which each curriculum supports the other and the entire program goals. This would be a fairly significant research undertaking but one worthy of a co-op program that is serious about its pedagogical mission.

Any new research in the area of curriculum and co-op may also benefit from the ability to now “cluster” similar programs by curriculum type or curricular cultures for cross-institutional studies or projects. For example, several preparatory curricula could be compared and contrasted for their ability to effectively prepare students for the workplace curriculum, or programs with a culture of “student development and self-direction” might be studied together or in contrast to
programs with a different culture of "producing work ready graduates". Both clusters could be considered in combination to examine how preparatory curricula for one culture of curriculum differ from those designed for a different culture of curriculum. Additionally, as many co-op programs begin to explore the use of new educational technologies and the internet in their curricular delivery, the Co-op Analytic Framework could be applied to curricular elements delivered in the online environment. This could help identify areas of strengths and weaknesses using this technology and assist in the design of blended co-op curricula to best meet the desired curricular outcomes.

**Extending Others' Research**

Many of the conceptions of learning discussed in this study represent theories or models proposed by educational researchers. Grosjean (2003) took one such theoretical model and used it to glean students' perspectives regarding their learning. In his work, six conceptions of learning were studied across multiple co-op work terms (learning as increasing knowledge, as memorizing and reproducing, as applying, as understanding, as seeing something in a different way, and as personal change). He found that the students' perspectives of the nature of their learning changed with each subsequent work term experience. By the end of two work terms, students shifted from the "what" and "how" of learning to the "why". Only after three work terms did the students he studied feel in control of their learning. This finding, if it is a universal phenomenon, has significant curricular implications. Exploring how this sense of managing one's own learning may be encouraged earlier in the students' co-op experiences
through curricular intervention is critical for curricula such as the Phantom that have self-direction and transformation at their core. Strategies that promote self-regulation and self-direction, once identified, should be included in an updated version of the Co-op Analytic Framework.

Another interesting area for further research relates specifically to the nature of the co-op workplace learning and how this impacts on the co-op preparatory curriculum. More studies are needed such as those by Hung (1999) and Munby et al. (2003) that specifically seek to describe and understand the different ways learning occurs in the workplace. In the case of the Phantom Curriculum that has as one of its aims the preparation of co-op students for the new learning environment of the workplace, such research would serve as an invaluable source of information regarding the content and format that best supports this aim.

Finally with the current interest in the co-op research community regarding the nature of co-op learning it would be interesting to assess whether there are any significant changes in co-op student learning as a result of various curricular interventions.
Implications for Practice

Re-conceptualizing Co-op and Its Curriculum

As co-operative education enters a second century in post-secondary education, it may indeed be time for its leaders to engage in their own critical reflection in and on practice. Since 1906, new theories regarding the nature of learning and transfer have informed what we know about how learners acquire and mobilize their skills and knowledge. New perspectives regarding curriculum development and how learning is best supported have also been proposed. The political and economic environments continue to change and impact education in a variety of ways. And, new concerns regarding the neo-liberal implications of school and workplace partnerships bubble up alongside of calls for more such partnerships. All the while, the overall model of co-operative education has remains relatively unexamined with respect to these changes.

In this context, the most important practical outcome of the analysis of the Phantom Curriculum using the Co-op Analytic Framework is the invitation for co-op curriculum developers and practitioners to seriously examine their co-op programs’ goals and the beliefs that underpin those goals in an effort to articulate a clear, contemporary vision for co-operative education and its curricula. A thoughtful body of aims and values generated in the current co-op context could serve to cohere a curriculum that is at increasing risk of becoming a succession of dated activities with little connection or integrity. Often curricular changes are “generated from ad hoc decisions in response to competing demands from
various constituencies rather than from articulated beliefs" (Joseph at al., 2000, p.162); an apt description of how the co-op curriculum has evolved over the years. A clear vision sets a standard that should create an impetus for change. Left unexamined, the co-op curriculum will continue to replicate itself year after year, placing it at serious risk of becoming anachronistic or reactionary, or both.

**Considering a Critical Pedagogy and Co-op’s Transformational Potential**

The analysis of the Phantom Curriculum raised many interesting discussion points, some which were specific to the Phantom but several which were rooted in a bigger question regarding who directs the co-op curriculum and to what ends. This bigger question should be asked of any co-op program today that wishes to ensure it continues to meet its primary educational goals, yet it is largely absent from the co-op discourse. With industry, government, and business from all sectors as critical partners in this model of education, their goals of developing more work-ready graduates seem to have been uncritically adopted by most co-op programs. Given co-op’s obvious contribution to the economic and innovation agendas (which are increasingly influencing the educational agenda) are any of its own goals and responsibilities as a public education program at risk? Neo-liberal critiques emerging from social constructivists such as Micheal Apple and Henry Giroux would argue yes, and propose that co-op may simply be a tool of business and industry used to deliver their *hidden curriculum*. In this light, co-op could readily be seen as contributing to the reproduction of current workplace practices and policies in that its apparent
singular mission is to produce uncritical, work-ready consumers who will easily transition into, and support, those workplaces.

In the transformational learning orientation, which I think reflects many of the broader educational goals of many co-op programs, such a mission would be inherently inconsistent. However, if the co-op model is to truly realize its transformational potential, that is, to provide a platform where students might explore, analyze, critique and change the work world for the better, it will need to seriously review its preparatory curriculum. Co-op practitioners will need to re-assess the goals of their programs within the context of the institution in which they reside and determine if such a role is appropriate. Is the development of a critical, informed and active citizenry a goal of the institution for its graduates? If so, in what ways does (or should) co-op contribute to that? In what ways might co-op be impeding that goal? Curriculum designers will need to explore what content is, and is not, included in typical co-op courses and why. Practitioners may want to look at how the "disorienting dilemmas" (Mezirow, 1991) and "messy problems" (Schön, 1983) of industry in which many co-op students find themselves, are de-briefed and framed in terms of "appropriate" responses. How does co-op encourage its students to call for change in the workplace, if at all? And what support is provided for students who find themselves in situations that violate their sense of well being (though perhaps not the law) because of certain workplace practices? On the cautionary side, there are at least two significant issues related to introducing a critical perspective to the co-op curriculum. One is
that some students may indeed engage in co-op programs solely for their proven benefits in transitioning effectively and efficiently into the world of work. Depending upon the reaction of co-op employers to a curriculum promoting critical reflection and action, co-op programs delivering such a curriculum could jeopardize their existence by risking both employer and student participation. A second issue is the very real ethical considerations that must be taken into account when engaging adult learners in a transformative process. There is the potential for significant emotional impact on the learner as they undergo the self-questioning process and facilitators of such educational approaches need to be aware of, and sufficiently skilled to support, a learner through what may be a very disorienting process. Whether co-op practitioners are prepared and positioned to provide such support is also a question of some import.

As a program uniquely bridging the two very different worlds of academia and industry, co-operative education needs to more fully consider the risks and responsibilities associated with both introducing a critical pedagogy to its work preparation curriculum, and choosing not to do so. At the heart of this decision again lies the question regarding the purpose and goals of cooperative education – what kind of learning, and for whose benefit, is this model of education intended to promote? Only once the field is clear regarding this question can an appropriate supportive curriculum be designed for co-operative education.
Extending Curricular Tools and Practices

For the co-operative education curriculum, the various frameworks and educational theories and philosophies that have been described provide a way of directing conversations about particular policies and practices in co-op that are currently under debate. The question of assessment in co-op, especially as it relates to ensuring “academic rigour” in co-op programs receiving academic credit, needs to be reviewed within this much larger context. Work needs to be done to better understand and describe how and why co-op assessment tools and procedures might rightfully differ from those in the classroom and yet are no less valid because of that difference. Using the various orientations as a way to position the transactional and transformational goals of co-op might be one such way. Understanding and situating co-op within the Authentic Learning movement might be another.

Co-op practice might also be usefully extended by including broader stakeholder engagement with the curricula. Elements that have emerged from this thesis could provide a basis for multiple focus group discussions intended to further explore curricular understandings and assumptions that may dominate particular stakeholder perspectives (E.g. do employers predominantly conceptualize co-op as a means of producing, and providing access to, future workers while students, faculty or administrators share different conceptions of co-op?). Such discussions could culminate in a deliberative conference on co-operative education that brings key stakeholders together with practitioners and curriculum
designers to explore areas of convergence and divergence related to co-op and its curriculum.

**Chapter Summary**

During co-op's first one hundred years in the post-secondary education system its curriculum has remained largely unexamined in the research. However, a "cycle of scrutiny and reflection (on curriculum) must occur to assess not only the outcomes but the worth of chosen goals in light of new knowledge, research, and changing social conditions" (Joseph et al., 2000. p.170). As with most classroom-based teachers, co-op practitioners have little time or support to engage in such important reflection, and until now no specific tool existed to guide such a review. The Co-op Analytic Framework developed for this study provides a multi-focal lens for self-reflection and analysis – a means of contemplating the very purpose of co-operative education and re-thinking how its aims may be achieved in the contemporary context.

At the very least, the Framework's analysis of the Phantom Curriculum can serve as a starting point for dialogue and discussion among co-op leaders and stakeholders regarding the role of curriculum in supporting co-op's educational mandate. Even if such dialogue should lead to some discord among the participants, it will have served to challenge some of the one hundred year old conceptions of co-op that have to date remained largely unexamined. The co-op curriculum cannot thrive if its vision, beliefs, practices, and values are
incongruent with the ever-changing environments of its key stakeholders. The only way co-op leaders can know when this is the case is through a thorough self-examination, beginning with the program goals and the curriculum intended to support them. This study offers a way of beginning that analysis, and in so doing hopefully provides the motivation for co-operative educators to more seriously and thoughtfully determine co-op's second one hundred years of growth and curricular development.
APPENDICES
Appendix 1
Syllabi from Selected North American Universities

University of Waterloo Co-operative Education
Co-op 101: Career Success Strategies

Course Overview:

Jan. 6th  Co-op WORKS – A welcome to co-op and overview of how the co-op partnership works and what to expect in the years ahead.

Co-op Survival Skills 1 – How to get started, use JobMine (the online job posting system), and decide which jobs to apply to.

Resume Writing – Open the door to the interview! Gear your resume to what our employers say they are looking for by adopting our proven resume writing strategies.

Jan 10th And 11th  Resume Blitz – have your revised resume critiqued. Sign up for your slot. You must be enrolled in Co-op 101 to participate.

Jan 13th  Co-op Survival Skills 2 – In the trenches: indispensable information for successfully navigating the co-op online job search process.

Interview Skills – An inside look into the interview process: what to expect and how to prepare. Build your confidence by learning how to present yourself to your best advantage!

Workplace Safety – You are responsible for your own safety; learn how to protect yourself not only at work but at home too! Session presented by the Industrial Accident Prevention Association.

Jan 20th  Co-op Survival Skills 3 – The last instalment of co-op procedures: work report requirements and the all important job ranking process. Take this opportunity to et any of your remaining process-oriented questions answered.
Protecting Your Professional Image – Safeguard your professional reputation in the workplace by understanding how to resolve career compromising situations.

Employer/Student Perspective – Get it from the source: a diverse group of co-op students and employers share their insights. Come prepared to ask questions.

March 3rd  Job Search Strategies

Co-op 101 at the University of Waterloo is complemented by an online Student Manual that covers the following, more policy oriented material:

- What is Co-operative Education & Career Services
- Career Development
- Academic Terms
- Job Search/Interview Process
- Subsequent Interview Cycle
- Learning Objectives
- **Pre-Work Term***
- **The Work Term***
- **Work Reports***
- Money

*outlined in more detail below

**Pre-Work Term**
- Co-op Graduation Requirements
- Vacation Days, Pay, and Overtime
- The Record of Employment (ROE)
- Harassment and Discrimination
- Medical Insurance
- Occupational Health and Safety Act
- Resources for Workplace Safety
- Strikes
- Non-Compete Agreements
- Intellectual Property
- Two Work Term Commitment
- Standings and Appeals
- Work Term Status

**The Work Term**
- Reminders
- Fitting In
• Worksite Visit
• Communication
• Work Term Evaluation
• Work Term Notes
• Returning to Campus
• Work Term Information
• Start/end and length of Work Term

**Work Reports**
• Faculty-Specific
• The Importance of Reports
• Purpose
• Without Employment
• Subjects
• Audience
• Confidential Reports
• Development
• Format
• Requirements and Procedures
• Recommended Reading
University of Ottawa  
Co-operative Education Preparatory Course Overview

Fall 2006 Work Term Preparation  
May 1

MANDATORY WORKSHOP: CO-OP guidelines and résumés  
At the CO-OP Office in the waiting room (4th floor, Brooks, room 420A)  
English session: Monday, May 1, 11:30 a.m. - 1:00 p.m.

May 1

Create and submit your résumé through the COOP NAVIGATOR for approval.

May 1 to 9

Check your résumé status through the COOP NAVIGATOR (where you clicked on Submit résumé). If your résumé was refused, please contact the CO-OP Office at (613) 562-5741 as soon as possible to book a résumé review session.

Starting on May 9

MANDATORY WORKSHOP: Applying to CO-OP jobs

TBD

View jobs and apply for them through the COOP NAVIGATOR.  
NOTE: You will not be able to apply for jobs unless you have confirmed your intentions for the placement.  
No late applicants will be accepted!

May 16

Apply for newly posted jobs.  
These jobs will be highlighted in orange. They are active for only 48 hours from the day they're posted.  
The last day for jobs to be posted is June 2.  
No late applicants will be accepted.

Everyday starting May 17 (12:00 a.m.)

You can now start to view and confirm your interview schedule in the COOP NAVIGATOR.

May 19 to June 12
MANDATORY WORKSHOP: CO-OP interviews

TBD

ON-CAMPUS INTERVIEW PERIOD

May 30 to June 12

Complete your ranking through the COOP NAVIGATOR.

June 13 (noon) to June 14 (noon)

Log into the COOP NAVIGATOR to view your matching results today. If you've been matched, the match will appear in your 'Term sequence' under your 'Personal profile' beside the fall 2006 term.

June 15

Students not matched
MANDATORY WORKSHOP: Continuous placement
At the CO-OP Office in the waiting room (4th floor, Brooks, room 420A)

English session: Friday, June 16, 10:00 a.m. - 11:00 a.m.
French session: Friday, June 16, 1:00 p.m. - 2:00 p.m.

June 16

MANDATORY WORKSHOP: Work-term excellence
You must attend this workshop even if you haven't been matched yet.
Co-op Curriculum Overview

Throughout your Co-op career, you will be exposed to many opportunities for learning through our blended curriculum. The blended curriculum includes a combination of online courses (BOL I & BOL II), face-to-face workshops, and access to Co-op and career resources in the Co-op Learning Community. The benefits of the blended curriculum are to provide:

- high quality and consistency of the online content,
- customizability of the workshops to develop the higher-level skills of various employability related topics, and
- convenient access to required resources.

Throughout the Co-op curriculum, you will be introduced to many guides (such as Co-op co-ordinators, professors, work supervisors, etc.) who will help you to get the most out of your Co-op experiences. Some of this learning may appear to be informal (such as discussions with other Co-op students and work colleagues) and some of it will be more structured (such as workshops and course work). As with anything, you determine the degree to which you will take advantage of these experiences.

Course Objective

The objective of the BOL I course is to help you see how all your experiences, both formal and informal, can contribute to your learning and enhance your performance in the work place and in school. With this understanding, you will learn to think about your skills as being transferable and consider how they will apply in various career areas. This course also helps you better understand your existing skills, as well as learn how to develop and mobilize new ones.
As a Co-op student and BOL participant, you have an exceptional opportunity to start to bridge the gap and draw linkages between your academic and employment careers. Through your Co-op experience, you will learn what is expected of you in the work place and in your career field as a whole. We encourage you to take advantage of all the available resources and opportunities for learning that you encounter throughout your time in Co-op.

**Bridging Online**

Bridging Online (BOL) is a web-based Co-operative Education pre-employment course that is completed in an online format as part of an application to Co-op. BOL is a unique skills transfer course that intends to help you identify and use your skills and knowledge beyond where they were learned. Specifically, BOL will focus on helping you use what you have learned in school effectively in the work place and vice versa.

Whereas many employment-oriented programs focus on “the tools” necessary for employment success (resumes, cover letters, and interviews), BOL helps you critically focus on how the content of those tools is learned, applied, and moved from one situation to another. The BOL curriculum is divided into two courses: **BOL I** and **BOL II**. Each course is delivered via WebCT as a two-week online course.
INTRODUCTION TO COOPERATIVE EDUCATION
College of Engineering

Professor Cheryl L. Cates  Email: Cheryl.Cates@uc.edu

36 PD 120 001  Monday  1:00 PM  Swift  Autumn Quarter 2006

COURSE OBJECTIVES
The objective of this course is to prepare you for effective participation in the Professional Practice Program at the University of Cincinnati. Through self-analysis, career field analysis, interviewing skills and techniques and resume preparation you will begin to develop the abilities you need to obtain a co-op position. This course is designed to help you optimize individual growth opportunities and develop skills that will be used throughout your personal and professional life. By the end of this course each student should:

1. Have a clear understanding of the cooperative education concept;
2. Have a working knowledge of the rules, regulations and operating procedures governing the Professional Practice Program at UC;
3. Have a preliminary understanding of the skills and abilities that you possess and the things that you value as relates to the world of work;
4. Have a preliminary understanding of at least one of the career options available to you;
5. Have created an effective resume;
6. Have gained insight into the interview process and into the types of behaviors that are most likely to elicit a job offer;
7. Have gained insight into the types of behaviors that are most likely to lead to success in the workplace.

REQUIRED TEXT
Introduction to Professional Practice, Centennial Edition

This text is available at both DuBois and UC Bookstores. In addition to the textbook, course content will be presented by lecture and discussion, panel presentations, role-playing and handouts.

OFFICE HOURS
I have scheduled drop-in hours on Monday's from 10-11:30 a.m. My office is located in the Division of Professional Practice. You enter on the 7th Floor of the Steger Student Life Center. Should you need to speak to me outside of these
hours, you may call me at 556-2801. If I am not in my office, you may leave a
voice message and I will return your call as soon as possible. I encourage each
of you to ask any questions you may have regarding an assignment well before
the day it is due. Please note that it is your responsibility to make sure that you
understand assignments and to initiate whatever action is necessary to reach
that understanding.

**IMPORTANT NOTES**

Once you begin participation in the Professional Practice Program, you will be
expected to understand the Program, therefore, strict attention should be given to
the subject matter presented in this course. More that two unexcused absences
will result in an automatic grade reduction for the course. Assignments are due
ON or BEFORE class on the day indicated on the course outline. Assignments
turned in late will be reduced by one letter grade per week. If you discover a
conflict with meeting the obligations of this course of an exceptional nature (i.e.,
death, serious illness, etc.), please notify me immediately.

**GRADING**

Each student is required to keep a copy of all work submitted in this course.
Graded work will be available for your inspection during class, however, please
return it to me before you leave so that the material can be placed in your
permanent file. Plagiarism of any kind is a serious violation of professional ethics
and will not be tolerated. This includes duplicating the work of another student, or
allowing someone to copy your work. Any episode of this nature will result in
immediate failure of the course.

<table>
<thead>
<tr>
<th>Graded Items</th>
<th>Grading Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Analysis 20% of final grade</td>
<td>95–100 points ↔ A 77 – 79 points ↔ C</td>
</tr>
<tr>
<td>Resume 25% of final grade</td>
<td>92 – 94 points ↔ A- 74 – 76 points ↔ C-</td>
</tr>
<tr>
<td>Career Planning Project 25% of final grade</td>
<td>89 – 91 points ↔ B+ 70 – 73 points ↔ D+</td>
</tr>
<tr>
<td>Handbook Test 30% of final grade</td>
<td>86 – 88 points ↔ B 67 – 69 points ↔ D</td>
</tr>
<tr>
<td></td>
<td>83 – 85 points ↔ B- 64 – 66 points ↔ D-</td>
</tr>
<tr>
<td></td>
<td>80 – 82 points ↔ C+ 63 – below ↔ F</td>
</tr>
</tbody>
</table>

**WEEKLY COURSE OUTLINE**

**September 25**

*Introduction to Cooperative Education*
- Syllabus and course content discussion
- Application Process
- What is Co-op?
- What's it's history?
- Roles of the Co-Op Triad
- Case Studies

**October 2**

*Learning through Cooperative Education*
- The UC Co-op Program
- Learning Objectives
- Student Projects
- Reports
- Topics for Learning Modules
- Read Student Handbook for next class

October 9 \textbf{Orientation to the Professional Practice Program}
- Discuss rules & regulations governing the Professional Practice Program
- How the program works
- PlacePro and PAL
- Handbook Test – 30% of Final Grade Test available through BlackBoard to be completed between October 9 and October 16
- Read Text pages 203-231 for next week

October 16 \textbf{The Importance of Self-Analysis}
- Self-Analysis: what it is and why it is important
- Skills and Values
- Career Exploration
- Discuss Self-Analysis Project (pg. 211-220)
  - \textbf{DUE} – October 30, 2006
- Discuss Career Planning Project (pg 231 or Company Research)
  - \textbf{DUE} – November 27, 2006
- Read Text pages 233-263 for next week

October 30 \textbf{Resumes}
- The Purpose, Format and Style of a Resume
- The Five C's
- Resume Do's and Don'ts
- Case Studies
- Read Text pages 275-304 for next week
- Bring rough draft of resume next week
- Self-Analysis Projects \textbf{DUE TODAY} - 20% of final grade

November 6 \textbf{Resumes and Interviewing}
- Continuation of Resume discussion
  - \textbf{DUE: November 13, 2006}
- Resume peer reviews
- Goals of the Interview
- How to prepare for an interview
- Dress for Success
- Interview Do's and Don'ts

November 13 \textbf{Interviewing}
- The importance of non-verbal communication
- Stages of the Interview
- Interview Demonstration
- In-Class Mock Interviews
- Read Text 33-200 for next class
  - \textbf{Resumes DUE TODAY} - 25% of final grade

November 20 \textbf{The Student Perspective}
November 27

- What can you expect in an Engineering Co-op?
- Resumes and Interviews - What will get you hired?
- Read Text pages 307-349 for next week

Routes to Success on the Co-op Job and Beyond
- Predictors of Success
- Surviving and Thriving
- Professionalism, Networking, Diversity, Sexual Harassment
- Case Studies
  - Career Planning Projects Due - 25% of final grade
Course Number and Title: MCOP U101: Professional Development for Co-op
Course Day/Time: Tuesday: 11:45AM-12:50PM
Credit Hours: 1SH
Classroom: 220BK
Instructor: Office: Robinson Hall
Office Hours: Posted www.myneu.neu.edu Phone: 617-373-3446
E-mail: a.canali@neu.edu
Prerequisites: Must be an Athletic Training, Cardiopulmonary and Exercise Sciences, Health Sciences or Physical Therapy student or permission from the instructor.

Course Description
This course introduces students in Athletic Training, Cardiopulmonary and Exercise Sciences, Health Sciences and Physical Therapy to cooperative education, professional development, and career management.

Course Objectives
Upon successful completion of this course students will be able to:
1. Compare and relate goals and expectations of co-op employer, coordinator and student.
2. Discuss the importance of communication skills, cultural awareness and professionalism in the health care field.
3. Describe policies and procedures of the Co-op Department.
4. Identify the co-op program goals, model, calendar, and referral process.
5. Identify personal strengths, weaknesses, values, behaviors.
6. Develop effective career management strategies.
7. Analyze cases of communication, problem-solving and ethical issues which students might encounter in the workplace and select appropriate professional behavior strategies.
8. Practice professional behaviors by participating in class assignments and activities.
9. Identify the differences between cooperative education and clinical education.
10. Identify various members of health care teams.
11. Create professional career management documents: resume, list of references, and letters.
12. Conduct a job search using technology including myNEUcool, the NU co-op database, and the internet.

**Required Textbooks:**

*Cooperative Education Handbook* (in BlackBoard)


**Teaching Methods and Learning Opportunities:**

Lecture, class discussion, small group discussion in class and use of BlackBoard

**C Grade Policy:**

Each student must achieve a grade of C (73-76) or above to pass the course and advance in the Athletic Training, Cardiopulmonary and Exercise Sciences and Physical Therapy Programs.

**Evaluations and Grading:**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Participation</td>
<td>400</td>
</tr>
<tr>
<td>Resume</td>
<td>250</td>
</tr>
<tr>
<td>List of References</td>
<td>50</td>
</tr>
<tr>
<td>Upload Resume &amp; References to myNEUcool database</td>
<td>50</td>
</tr>
<tr>
<td>Broadcast Letter</td>
<td>250</td>
</tr>
<tr>
<td><strong>Total Points:</strong></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>

**Program Expectations/Professional Behavior:**

- Since this is an interactive discussion course, student contribution and attendance is important. It is expected that students will attend every class, arrive on time, and complete both reading and writing assignments and participate in any other specified activities. Out of consideration for all course participants, students are expected to contact their instructor if a class absence is anticipated. Unexcused absences will be reflected in your final course grade. For absences due to prolonged illnesses, a doctor’s note is required.

- The student who misses a class is responsible for finding out the content of that class and completing any assignments, which are due.

- Students are expected to behave in a professional manner during class. It is expected that all interactions, discussions, and opinions expressed in class will reflect courtesy and respect for each member in the class.

- Reading assignments should be completed before class in order to participate effectively in discussions.

- All written work must be typed, unless specified otherwise. Work, which is not typed, will not be accepted. Put your name on all pages of the assignment. Assignments must be
written in paragraph form, in complete sentences, and without abbreviations. Points will be deducted for spelling and grammar errors.

- All assignments must be handed in on time during class. Late assignments will not be accepted without the instructor’s prior approval.

- Students are expected to abide by the University Code of Conduct. To review the Code please refer to the *NU Undergraduate Student Handbook* or go to http://www.atsweb.neu.edu/judicialaffairs/academicintegrity.htm. All violations of the Code will be referred to Judicial Affairs.

- If students have a documented disability and require special accommodations, it is requested that they notify the instructor and contact the Disability Resource Center in 2 Dodge Hall. The staff in the office is available for assistance.

- University policy dictates that students must seek the instructor's permission to tape record class lectures. *Please turn off all cell phones and pagers during class.*

<table>
<thead>
<tr>
<th>Class Schedule</th>
<th>Topic</th>
<th>Assignment/Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/10</td>
<td>Co-op Goals &amp; Expectations</td>
<td>Complete Skills ID Inventory (BB) &amp; write Paper /1/17; Read Chapter 2 &amp; Appendix B in FYFPJ /1/17</td>
</tr>
<tr>
<td>1/17</td>
<td>Transferable Skills/Resumes</td>
<td>Resume &amp; References/1/24</td>
</tr>
<tr>
<td>1/24</td>
<td>Peer Resume Critique/Letters</td>
<td>Revise resume/references/ 1/31 Write Broadcast Letter/ 1/31</td>
</tr>
<tr>
<td>1/31</td>
<td>Making Co-op Work for You</td>
<td>Read Chapter 1 &amp; Appendix A in FYFPJ/2/7, Co-op Handbook in BB/2/7</td>
</tr>
<tr>
<td>2/7</td>
<td>Navigating the Job Search Process</td>
<td>Upload revised resume/ref on myNEUcool/ 2/10 Read Chapter 3 in FYFPJ/ 2/14</td>
</tr>
<tr>
<td>2/14</td>
<td>Interviewing</td>
<td>Read Purtilo’s Chapter 1 (BB)/2/21 Jobs Liked/Disliked Paper/2/21 Print &amp; complete Work Values Inventory (BB) &amp; bring to class/2/21</td>
</tr>
<tr>
<td>2/21</td>
<td>Self Assessment/ Work Values</td>
<td>Post Questions for Student Panel In BB drop box/ 2/24</td>
</tr>
<tr>
<td>2/28</td>
<td>Upper-class Co-op Student Panel</td>
<td>Read Chapter 4 in FYFPJ/3/14</td>
</tr>
<tr>
<td>3/7</td>
<td>Spring Break/ No class</td>
<td></td>
</tr>
<tr>
<td>3/14</td>
<td>Professional Behaviors</td>
<td>Post Questions for Employer Panel In BB drop box/ 3/17</td>
</tr>
<tr>
<td>3/21</td>
<td>Co-op Employer Panel</td>
<td></td>
</tr>
<tr>
<td>3/28</td>
<td>Interpersonal Relations/Communication</td>
<td>Read Purtilo’s Chapter 3(BB)/ 4/4</td>
</tr>
</tbody>
</table>
4/4 Cultural Awareness

4/11 Legal and Ethical Issues

4/18 Reflective Practice: Making the Most of Co-op

Read Chapter 5 in FYFPJ/4/11
Drexel University
Co-op Course Overview, 2006

Week One - Co-op Overview
Introduction of the SCDC, relevant services, and the Co-op Coordinator’s role in assisting students. Syllabus and course assignments will be reviewed in detail. Students will learn about types of jobs appropriate for different majors and what to look for and expect in a Co-op job experience. Overall expectations for Co-op will be discussed.

Week Two – No class

Week Three – Career Assessment
Self-exploration and Career Exploration: Students will learn how to identify their interests, skills, abilities, values, and goals and how these influence their career path. Students will explore different jobs, careers, and specific companies that are of interest to them. Students will begin to understand how self-exploration is the foundation of a successful job search and of lifelong career planning.

Week Four – Résumé Development
The importance of the résumé as a marketing tool for one’s job search will be reviewed. Students will use the assessment of their skills and abilities from previous class to begin creating their own résumé. Students will be taught basic résumé layout, styles, and general guidelines. There will be a discussion of how to customize résumés for specific majors and industries.

Week Five – Drexel SCDCOnline Résumé
Students will be taught how to enter and format their résumé(s) in SCDCOnline. They will also be shown how to look up the name of their Co-op coordinator, access ES&P archives, and navigate the SCDC web site.

Week Six – Interview Process
Students will learn about overall guidelines for successful interviewing. Various types of interviews, the role and responsibility of the participants, preparation and research, dress criteria, and follow-up etiquette will be presented including thank you notes.

Week Seven – Interview Skills
Students will practice interview skills in class through role-playing activities utilizing sample job descriptions. Effective answers to frequently asked questions will be reviewed.

Week Eight – SCDCOnline Job Search and SCDC Policies and Procedures
Students will receive a comprehensive outline of Drexel’s Cooperative Education policies and procedures, including those related to Drexel’s online recruitment-management system, SCDCOnline. A display and explanation of the different stages of the online job search process will be reviewed.

Week Nine - Independent Job Search
Students will be introduced to the steps in searching for a job outside of the SCDCOnline. The value and advantages of pursuing an independent search will be reviewed as well as methods of finding information about companies/organization, strategies for networking, “cold-calling” employers, writing cover letters, and resources available through the SCDC, including the resources available in the Career Services Library. The importance of a concurrent independent job search and how successfully to complete an SCDC Job Search Journal will be reinforced.

Week Ten - Workplace Issues
Students will learn about professional conduct in the workplace and other issues such as sexual harassment, appropriate use of company resources, professional
attire, tardiness, etc. Emphasis will be placed on communication skills with potential supervisors, coworkers, and customers. Students will be presented with a number of actual workplace scenarios and will identify common workplace behaviors to avoid while on co-op, as well as attributes that employers look for in co-op students.
APPENDIX 2

Phase 2 Analysis: Exploration of Culture Questions

When defining major curricular components or selecting elements for review it may be helpful to follow Schwab's (1973) commonplace framework as a guide (content, milieu, teachers/learners, and assessment. Once an element has been selected, the following questions can serve as a guide to examine the culture of the curriculum from which the element selected for review is derived:

**Conceptual Base:** Why does this curriculum exist? Is it intended to:
- a. develop students' cognitive and problem solving skills in a real world context?
- b. engage students in critical inquiry and prepare them to challenge unjust workplace practices and develop the values and skills needed for social re-construction?
- c. train students for the workplace and for survival in the new economy?
- d. develop each student's personal skills and interests in a career context?
- e. help students understand their world better, and how to learn throughout life?
- f. Other (describe in 2-3 sentences)

Explain how the above articulated conception of curriculum relates to your co-op program's stated goals.

**Impressions:** What depiction of education within this conceptual base captures many of its important themes and assumptions? (e.g. education as contributing to the economy, education as personal development, education as social re-construction, etc.)

**Visions:**
What are the goals of co-op education for the student, the employer, and the institution? What is the ultimate benefit to society if all individuals participated in co-op education at your institution?

**History:**
What are the forces, events, and ideas that influenced the culture or concept of this co-op curriculum?
Students:
What are the beliefs about students' needs, development, competencies, motives, and interests regarding this curriculum? How have these beliefs influenced co-op practice?

Teachers (Co-op staff, faculty, and employers):
What are the beliefs regarding the role of the "teacher" in this curriculum? How should they best facilitate co-op learning?

Content:
What constitutes the co-op subject matter? How is this subject matter determined and organized?

Planning:
What are the models of curriculum development used to design this co-op curriculum? Who planned it? Who determines the content? Who has the power to make major curricular decisions?

Evaluation:
How are students assessed? How should they be? Who determines assessment tools and protocols, and based upon what?

Context:
What are the environments of the co-op classroom, institution, and workplaces? How do these influence co-op learning? How is the value or success of the curriculum assessed?

Dilemmas of Practice:
What problems or challenges do the various co-op "teachers" (staff, faculty, and employers) face when they work in or try to implement this culture of curriculum?
APPENDIX 3

Phase 3 Analysis Questions

The aim of this element of the co-op curriculum is best described as:
   a. ensuring relevant information is passed along to the student including what is acceptable in terms of workplace expectations and performance
   b. developing students’ thinking and problem solving skills for the workplace
   c. learners developing themselves and the world through workplace activities and involvement in social justice projects/activities
   d. finding the most efficient and effective way to prepare new workers for the labour force

2. How does this contribute to the purposes of the curriculum discussed in Phase 2 of the analysis? If they are at odds, explain or re-consider.

3. This element is primarily delivered is through
   a. lectures, seminars, readings and prescriptive feedback
   b. reading, discussions, collaborative and co-operative work with others, and active/experiential learning
   c. ethical case studies, interdisciplinary critical group discussions, reflective practice and journaling, and community project work

4. Given the purposes of this curricular element, how would it best be delivered?

5. In the delivery of this element, the teacher:
   a. is responsible for setting all the curriculum (content, scope, sequencing) and leads the class activities, with students responding as appropriate
   b. facilitates students led questions and assists students with their thinking and problem solving skills related to the subject.
   c. is a co-learner, connecting with students on problems of mutual interest in the community

6. This curricular elements is assessed through:
   a. traditional academic tests of content mastery
b. testing for analysis and synthesis skills as well as use of problem solving frameworks  
c. use of authentic learning tools such as rubrics, peer and self-evaluations, journals and portfolios

7. What is the main content to be covered in the delivery of this curricular element? (consider major class topics, key assignments, expected learning outcome(s), key areas tested, etc.)

8. What other content is pertinent to the aim of this element (noted in question #1) or purpose of the curriculum (discussed in Phase 2 of the analysis) but NOT included in the subject matter covered? Discuss whether it should or should not be included.

9. What beliefs, values and attitudes relevant to this curricular element are “quietly” passed along to the learners without actually being an explicit part of the curriculum (e.g. competition makes us stronger, school derived knowledge is inadequate for corporate success, unhappy workers are generally underperformers, large corporations are the preferred employers, lack of success in co-op is the student’s fault, skill ad knowledge transfer occurs naturally, etc.).

10. In what ways are students encouraged to become active participants in a critical review of co-op workplaces and in leading or advocating for positive change? To what extent, if any, should they? How should co-op students who are interested in participating in such social reform be counseled or supported? In what ways would employers be involved? How should co-op’s position be made explicit in this regard?

11. How do key stakeholders participate in the development, delivery and assessment of this curricular element? Whose perspectives carry the most weight in deciding the ultimate content and format? Why?
REFERENCE LIST


271


Rowe, P. (2005). Interview at WACE 2005


