

**A COMPARISON OF PRE-POST WORKSHOP COURSE  
OUTLINES FOLLOWING PARTICIPATION  
IN A FACULTY DEVELOPMENT WORKSHOP**

by

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Bachelor of Arts, Punjab University, 1989

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

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In the  
Faculty of Education

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## **ABSTRACT**

This thesis research examines the integrity and effectiveness of a course design workshop by exploring Workshop artefacts for the presence of valued Workshop concepts: (i) analysis of course content, (ii) learning outcomes, (iii) instructional strategies, (iv) assessment, and (v) alignment. Two analyses were undertaken. The first analysis laid the groundwork for the second analysis that examined the pre and post-Workshop course outlines of participants for the presence of valued concepts. A detailed document analysis was used in both analyses. The results of this research suggest that (i) what was actually taught at the Workshop was aligned with valued concepts, and (ii) the participants' post-Workshop course outlines showed, in general, an increased grounding in valued concepts underpinning the Workshop. Both the findings of this research and the methodology employed are significant to the field of faculty development where there has been concern that development activities are often superficially evaluated.

**Keywords:** Faculty development evaluation; Post-secondary teaching and learning; Course design workshop; Pre-post document analysis; Theories of action; Alignment

**Subject Terms:** College teachers – In-service training; College teaching

## **DEDICATION**

To my grandparents, (late) Amrik Singh and Sheila Amrik Singh, for the loving home they created.

To my mother, Parminderjeet Singh, whose sense of wonder and unfailing belief in my ability gave me curiosity, joy, and confidence.

To my husband, Jasbir Singh Mundy, whose stability, love and early encouragement have been invaluable through this process; and to my son, Arjan Singh Mundy, feisty, independent, loving, and fun, whose easy acceptance of my studies and work over the last few years has been wonderful.

In memory of my father, Kanwaljit Singh.

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# 1: INTRODUCTION

## 1.1 Introduction

The numbers of students completing an undergraduate degree has steadily risen (Wilcox, 1997), and universities have seen increased demands for accountability, including accountability of the quality of teaching and student learning (Ho, Watkins, & Kelly, 2001). In turn, instructional support and Faculty Development centres in North American universities have been challenged to provide evidence of the impact of their work in terms of improvement in teaching and learning.

This evidence has been slow to develop for a number of reasons, not the least of which is that the individuals who work in Faculty Development centres often are not provided with the time or resources to carry out research about their practice. The research that does exist has been dogged by various criticisms, the primary one being that Faculty Development initiatives are most often evaluated through participant satisfaction ratings rather than in ways that indicate an impact on teaching and learning (Weimer & Lenze, 1991; Levinson-Rose & Menges, 1981).

The research presented here goes beyond satisfaction ratings, and looks at post-secondary instructors' course outlines before and after they completed a course re-design Workshop at two Canadian universities. The primary purpose of this research was to examine the course outlines for change, and for the presence of valued Workshop concepts.

In this introductory chapter I provide some background about Faculty Development research and practice, outline the value of this research, and discuss the context for my research, the Course Design Workshop (from here on this is referred to as “the Workshop”), including the assumptions underlying the design of the Workshop. The chapter concludes with the research questions for this study.

## **1.2 Background**

The term “Faculty Development” has most often been understood to refer to activities and programs designed to improve teaching in institutions of higher education, and enhance the quality of student learning (Emerson & Mosteller, 2000; Weimer & Lenze, 1991; Levinson-Rose & Menges, 1981). My thinking aligns with this understanding of Faculty Development.

Research and practice in Faculty Development have been subject to two important criticisms: i) the lack of a theoretical and conceptual foundation in the design of Faculty Development initiatives; and ii) the nonexistent or problematic evaluation of Faculty Development activities, often marked by less than rigorous research designs. These two critiques of the area are somewhat interlinked; rigorous evaluation and research of procedural models of an area have the potential to feed into theoretical and conceptual models for that area.<sup>1</sup> My

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<sup>1</sup> Here, it is also useful to distinguish between theoretical rationales and evaluation required in two distinct though overlapping areas within Faculty Development activities: (i) the pedagogy of Faculty Development, which we are beginning to understand often lies within the realms of adult learning (e.g., Mezirow’s transformative learning theory, Schon’s theory of a reflective practitioner, etc.); and (ii) pedagogy of student learning in higher education, that is, why do we seek to teach what we do within a particular activity—an area that lies within the realm of student learning and psychology (e.g., student motivation, approaches to learning etc.).

research is conducted in the context of, what I will argue is, a theoretically sound Faculty Development initiative (i.e. the Workshop), and focuses on the issue of problematic evaluation.

Two factors contributing to the problematic evaluation of Faculty Development are the staffing and budgetary issues that Faculty Development units have historically faced. Weimer and Lenz (1991) point out that:

... the[se] units [were] often chronically underfunded and understaffed, with little time for research beyond the pragmatic question—did faculty like the program? Will they come if we sponsor one like it next year? (p. 327)

In addition, organizational mandates of most instructional support units focus on teaching support (often thought of as service) and not research. This separation of practice and research is evident in many, if not most, Faculty Development centres in North America, Europe, and Australia. Such a division prevents people best positioned to carry out this research from doing so.

Until recently, the majority of Faculty Development activities described in published sources have incorporated participant satisfaction ratings as the sole method of evaluation. Called 'happiness' indexes (Levinson-Rose & Menges, 1981), this form of evaluation has been vigorously criticized by reviewers over the decades (Emerson & Mosteller, 2000; Weimer & Lenze, 1991; Levinson-Rose & Menges, 1981), because it provides limited feedback about the effectiveness of the Faculty Development activity to improve teaching and learning. In addition, design problems (related, for example, to the lack of theoretical frameworks, the use of inappropriate methodologies and misleading

interpretation of findings) within research studies still abound (Steinert, Mann, Centeno, Dolmans, Spencer, Gelula, Prideaux, 2006), posing further challenges towards developing a stable research base upon which to build. Researchers agree that the very nature of Faculty Development is partly to blame for this state of affairs. It is a complicated area to study and evaluate (Weimer & Lenz, 1991). Random design experiments are nearly impossible to conduct, and the interventions themselves are difficult to study, as many intervening and confounding variables cloud interpretation of the findings (McAlpine, Amundsen, Clement, and Light, under review; Steinert, et al., 2006; Weimer & Lenz, 1991)<sup>2</sup>. Impact on student learning has been an especially challenging area to assess. As such, a combination of time, logistical constraints and confounding variables often lead to faculty developers using simple and simplistic evaluation methods, most commonly satisfaction ratings.

A frequent focus of the existing research in Faculty Development has been understanding how an instructor's conceptions and beliefs about teaching and learning change, and the predicted impact of these on their actual teaching practice (for example, Hativa, Barak, & Simhi, 2001; Kember & Kwan, 2000). However, Kane, Sandretto, & Heath (2002) have argued that researchers may be assuming unwarranted changes in instructors teaching practice, or their theory-

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<sup>2</sup> The recent move towards integrative methods research within educational research provides a valuable tool to explore multiple facets of Faculty Development activity. Interestingly, Levinson-Rose and Menges (1981) suggested a similar direction for researchers in the area when they pointed out that quantitative methods "tend to distance researcher(s) from participants in the name of objectivity and to oversimplify teaching and learning in the name of control.... Quantitative and qualitative approaches are not yet intertwined and applied to the study of teaching improvement efforts" (p. 419). Mixed-methods or integrative research has probably been an ongoing activity over the years, but now has new validity, and a label under which it can be discussed.

in-use (Argyris & Schon, 1974; Argyris, Putnam, & McLain Smith, 1985), based only on a change in beliefs, or conceptions of teaching and learning, and self-reports of teaching practice.

Kane et al. (2002) emphasize the difference between “espoused theories” and “theories in use”. An espoused theory is defined as “the theory [or response] that encompasses [a person’s] ...aims and intentions...These are theories that we use to explain or justify our behaviour” (Schon, 1987, Argyris & Schon 1974, as cited in Kane et al., 2002, p. 136). Theories-in-use are defined as “tacit theories that underpin practice and determine action” (Kane et al., 2002, p. 136); this is what instructors actually do in the act of teaching and includes planning, classroom or online teaching actions, and the assessment of learning. These aspects of teaching underpin practice, are often tacit (Schon, 1987, as cited in Sandretto, Kane, & Heath, 2002), and cannot be assumed to be aligned with espoused theories.

Assuming changes in theories-in-use based on espoused theories of teaching is especially problematic as there is, as yet, only scattered research suggesting a link between beliefs, conceptions, self-reports of teaching (espoused theories of teaching) and actual teaching practice (theories-in-use). Several researchers suggest that beliefs, conceptions and self reports of teaching are often incongruent with an instructor’s actual teaching (for example, Martin, Prosser, Trigwell, Ramsden, & Benjamin, 2000; Gibson, 1998). They argue that instructors might for example, have learner centred teaching conceptions, but may teach in ways more consistent with an information



transmission conception. A similar inconsistency is reflected in the literature focusing on public school teachers (for a review of this literature, see Fang, 1996<sup>3</sup>).

Hence, according to the critique put forward by Kane, Sandretto, and Heath (2002), to claim an impact on instructional practice, a Faculty Development initiative must go beyond evaluating instructors' espoused theories and/or self-reports of teaching, to actually evaluating instructors' theories-in-use.

My research takes a step in this direction by examining the course outlines developed by professors before and after their participation in a Course Design Workshop. Course outlines, a contract between an instructor and his/her students (McAlpine & Emrick, 2003), is an artefact that is a well thought out and a highly contextualized, concrete plan. It is arguably one of the points at which an instructor's espoused theory becomes operationalized as a preliminary theory-in-use, and as such, can be argued to be evidence of a preliminary theory-in-use (Sandretto, Kane, & Heath, 2002). I also suggest that evaluating artefacts such as a course outline has the possibility to inform the research and discussion on connections between espoused theories and theories in use, due to the very explicit and concrete nature of course outlines.

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<sup>3</sup> There is a suggestion in this literature, that earlier studies indicating consistency between beliefs and practice were based on comparing teaching beliefs and hypothetical tasks, and later studies comparing teaching beliefs with actual classroom observations have generally indicated that instructional beliefs and practice tended to be inconsistent (Fang, 1996).

### **1.3 The Research Context: The Workshop**

The Course Design and Teaching Workshop (referred to here as the Workshop) provides the context for this research<sup>4</sup>. This Workshop was conceptualized in the early 1980s, at McGill University, and was initially designed to address questions such as the following:

- Why do short topical workshops on teaching methods not seem to lead to the changes in teaching—specifically learning-oriented teaching—that we seek to promote? (Weimer & Lenz, 1991)
- How can we support professors to focus more on student learning of the subject matter than on presenting subject matter content? (Ramsden, 1992; 2003)
- Why is it that some professors can articulate appropriate ideas about teaching, but do not put into practice what they seem to understand? (Cranton, 1994; 1996)

The Workshop is now offered (sometimes altered to match the specific institutional context) at eight Canadian universities. The data for this research was collected from participants in the Workshop offered at two Canadian universities, one categorized as a research intensive university and the other a comprehensive university. Further information about specific data sources is provided in Chapter 3: Methodology.

#### **1.3.1 Assumptions Underlying the Workshop**

There are certain assumptions that underlie the Workshop, related to the knowledge and skills that professors' bring to teaching, the nature of teaching

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<sup>4</sup> The thesis research is part of a larger research project examining the Course Design and Teaching Workshop, that has been cleared by the SFU Ethical Review process.

and learning in higher education, and the institutional context professors work in. Each is discussed below.

*The knowledge and skills that professors' bring to teaching:* Most professors attending the Workshop are graduates of North American doctoral programs, and have highly specialized content expertise. Such programs have historically placed great emphasis on preparing students to be scholars in their discipline, but have often placed little emphasis on equipping them to teach (Boyer, 1990) and probably do not include an exploration of how knowledge develops within various disciplines (Riordan & Roth, 2005, as cited in Amundsen, Weston, & McAlpine, in press). This issue is further heightened as disciplinary norms and practices often remain tacit<sup>5</sup> (Polanyi, 1966; Amundsen, Weston, & McAlpine, in press). Not yet possessing an easily accessible breadth of subject matter knowledge or an adequate pedagogical grounding, faculty, especially new faculty, are often overwhelmed by the variety of teaching demands placed on them, and are unable to create "learning-centred teaching within reasonable time" (Saroyan, Amundsen, McAlpine, Weston, Winer, Gandell, 2004, p. 16).

Additionally, workshops to support teaching have historically focused on generic teaching skills (such as presenting a lecture, developing a course outline, facilitating a discussion), often without attempting to connect such skills to a professor's understanding of how knowledge develops, or students learn, in a discipline (Neumann, 2001).

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<sup>5</sup> Middendorf & Pace (2004) suggest that Academics often 'choose to go into fields where they are successful at that kind of thinking' (p. 5); as such, they could have leapt effortlessly over ways of thinking that might be daunting for novices.

An important challenge for Workshop facilitators is to engage professors in a process to examine their assumptions about teaching and learning, as the ability to engage in such an examination frees instructors to rethink their practice in light of the assumptions they consider valid. Without such an analysis, a superficial understanding of the roles of the teacher, the learner, and the teaching and learning process could limit or hinder an instructor's ability to make choices about teaching practices that best support particular types of student learning (Cranton, 1996; Mezirow, 1991).

*The Nature of University Teaching and Learning: The Workshop* facilitators take a learning centred perspective of teaching, which they differentiate from a student- or learner-centred perspective: a learning-centred perspective asks instructors to keep their focus firmly on the type of student learning they would like to encourage in a course, and let all subsequent instructional decisions flow from this focus. However, the facilitators have come to understand that to hold a learning-centred perspective, and be able to act on it requires a complex, integrated, and multilayered understanding of the nature of teaching and learning that incorporates content expertise with pedagogical understanding.

*Institutional Contexts Professors work within:* The research university is often the context within which professors develop as teachers. This context places immense importance on 'the number and size of obtained research grants, the number and quality of publications, the number of graduate students supervised, and the recognition of work by prominent researchers in the

discipline or field' (Saroyan et al., 2004, p. 20). The focus on teaching is often substantially less, and in most cases has been of less importance to a professor's university career. Such juxtaposition often accords a low priority to an investment in improving teaching and therefore, student learning.

### **1.3.2 Description of the Workshop**

The Workshop involves thirty hours of group and individual work and generally takes place over a five-day period, although a number of different formats have been used at the two universities that serve as the context for this study and the six other Canadian universities where this Workshop is now offered. Participation in the Workshop is voluntary. Participating professors from different disciplines design or redesign a course of their choice and practice teaching aspects of it.

The Workshop is designed so that professors begin their day in a large group setting for teaching of the basic course design concepts, but spend most of their time in small (6–8 individuals) working groups working on exploring these course design concepts in the context of their own course. By the end of the Workshop, participants have produced a course outline for their course, which includes a plan for the assessment of learning. It is important to note here, that participants work on these course outlines on their own each day, after the workshop. They receive little feedback on their course outlines during the Workshop, except on the last day of the Workshop. This is organized so that participants put up their course outlines on the walls (in the way of a poster session), and everyone walks around the room looking at each others' course outlines, and providing input and comments by way of sticky-notes. Participants

also create an action plan for the implementation of their new course design. Many past participants of the Workshop return to act as co-instructors for subsequent Workshops. (See Saroyan & Amundsen, 2004 for a detailed description of all aspects of the Workshop.) Follow up groups meet monthly for at least a year after the conclusion of the Workshop. The purpose of the follow up groups is to support faculty as they implement their action plans, explore teaching related questions and continue the sense of community developed during the Workshop.

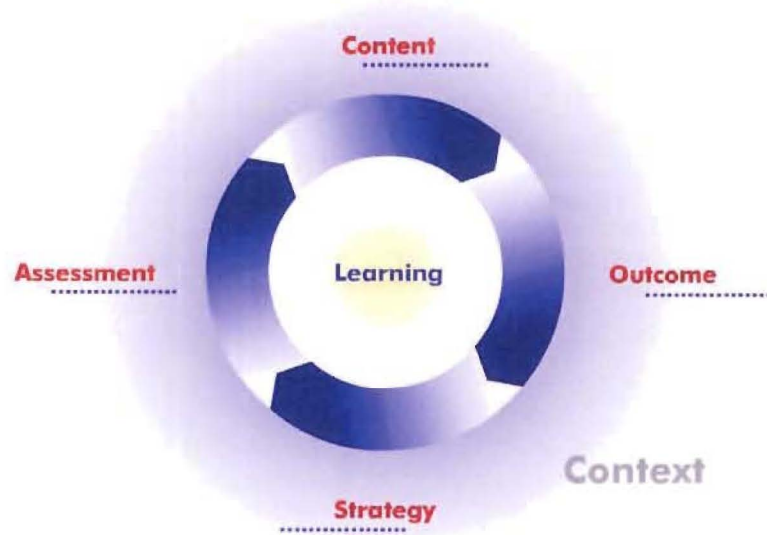
The primary focus of the Workshop and the follow up groups is to foster a reasoned and intentional approach to teaching, informed by reflective practice and peer critique. Participating professors are encouraged to link teaching actions directly to student learning regardless of whether the desired learning is decided by the instructor, the students, or both. The Workshop facilitators' primary orientation is that student *learning* is the focus for teaching decisions, and the development of professors' teaching practices in a way that is consistent with this perception is encouraged. Some participant professors in the Workshop already hold this perspective. Others may experience a shift in perspective from a teaching paradigm to a learning paradigm (Barr & Tagg, 1995) as a sudden insight or inspiration. Still others may build gradually on the premise that student learning can serve as the basis for teaching decisions and actions, and that every effort in the teaching process should be directed at making the intended learning happen.

The Workshop and follow up groups also aim to develop a shared discourse on pedagogical issues, and a language to express individual conceptions about teaching and learning to others. Participants are probed in ways that help them to articulate their own evolving ideas about what meaningful learning is in their disciplinary context, and what a reasoned approach to teaching might be to support this learning. This process often leads participants to question past teaching habits and disciplinary teaching norms, and creates opportunities for productive and clarifying discussions. The intellectual exercise of understanding the rationale for a teaching method and how it relates to learning in one's discipline, then testing out the teaching method is akin to what many professors do as scholars (Shulman 2000, Kreber 2001, as cited in Amundsen, Weston, & McAlpine, 2005).

### **1.3.3 Theoretical Orientation Underpinning the Design of the Workshop**

Two lines of thought that have strongly influenced the Workshop design are (i) looking at teaching and learning through a disciplinary lens, and (ii) the field of Instructional design. The Workshop design (as shown in the concept map of the Workshop in Figure 1-1) indicates key Workshop concepts, (such as an analysis of course content, learning outcomes, instructional strategies, assessment methods, and the alignment between each of these elements) that have originated from these two lines of thought. The following section looks at the impact of both these lines of thought on the Workshop design.

**Figure 1-1: Concept Map of the Workshop**



### **1.3.3.1 Teaching and Learning through a Disciplinary Lens**

The Workshop is designed to support professors to “tap into” their understanding of how knowledge develops in their disciplines. This disciplinary understanding of learning is an initial step in understanding how course concepts build upon each other; it underpins decisions about the types of student learning to be valued and encouraged in a particular course. In essence, professors are encouraged to ensure congruency between their understanding of course content, and the learning outcomes. This combination of a clear representation of professors’ personal understanding of the course content, and a related articulation of the student learning essential to the course, help the professor (and later the student) to clearly understand how knowledge develops within a particular course. This provides the professor with a foundation and rationale for the course design. In placing professors’ subject matter expertise and understanding “front and centre of the Workshop” (Amundsen, Weston, McAlpine, 2008, in press, p.



6), facilitators hope to make this the lens through which professors view the rest of the course design process; that is, “professors develop into accomplished instructional decision makers through an intellectual process in which their subject matter understanding is the primary point of reference” (Amundsen, Weston, McAlpine, in press, p. 5).

Given that faculty tend to be passionate about their subject matter, the Workshop facilitators believe that making their subject matter expertise the reference point for subsequent teaching decisions within a course can also make the teaching process more meaningful and satisfying for professors. Starting at this point, it is easier for professors to think of student learning as “an ongoing process of developing understanding in the discipline rather than as mastering a sequence of topics within a particular course” (Amundsen et al., 2005, p. 3).

To support professors’ in the analysis of course content, an “unstructured form of concept mapping is used in the Workshop, as the first step in the course design process” (Amundsen, Weston, & McAlpine, in press, abstract)<sup>6</sup>. Workshop participants begin with analyzing the course content to identify central course concepts and the inter-relationship among these concepts. The resulting concept map (or alternative depiction) evolves during the time of the Workshop, as participants share and explain their concept maps to other participants, and are provided with feedback on its clarity. The Workshop facilitators believe that for professors, clarifying the course content in their minds, spending time thinking

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<sup>6</sup> Though superficially similar to the idea of content analysis within Instructional Design models (for example, Dick, Carey, and Carey, 2005), the process and underlying thinking differ substantially, due to the assumption of coherent content expertise within instructional design.

through how different concepts relate to one another, reflecting on how student understanding of these course concepts develops, and being able to explain this to others, makes it easier for participants to articulate learning outcomes and other subsequent aspects of their course design.

### **1.3.3.2 The Influence and Contributions of Instructional Design to the Workshop**

The concepts of learning outcomes, instructional strategies, assessment methods, and the focus on alignment between course design elements (indicated by the arrows in the Workshop's concept map, Figure 1-1, p. 13) are based on thinking central to the field of Instructional Design (see for example, Richey, 1986; Dick, Carey, & Carey, 2005)<sup>7</sup>. The Workshop draws on the basic elements of instructional design while at the same time recognizing that instructional design is only one approach to course design and is more closely aligned with perspectives about teaching in some disciplines (for example, in the Sciences) than in other disciplines (for example, in the Humanities). As a result, Workshop participants may not consider all instructional design elements to the degree or in the order presented in the Workshop. Each of these basic instructional design elements is discussed in greater detail below.

#### **Student Learning and Learning Outcomes**

The Workshop defines learning outcomes for participants as “statements describing the learning students are expected to achieve in the course” (Donald, 2004, p. 54). Though the use of learning outcomes in the design of instruction is

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<sup>7</sup> In its early years Instructional Design itself has borrowed heavily from other theoretical and conceptual bases: systems theory, communications theory, learning and instructional theories. Therefore, most of the concepts discussed here also find their origins in one or another of these bases.

central to the field of Instructional Design, this idea finds its origins in earlier learning and instructional theories; Mager (1962, 1984) coined the term “learning objectives” which he described as statements that clearly outline the behaviours that students should be able to do once they have completed the outlined instruction.

Dick et al. (2005) suggest that a summary analysis of investigations on the impact of objectives on student learning outcomes indicates mixed results. However, such research does not speak to the value of learning outcomes for the purpose of designing instruction. Once created, such objectives or outcomes, provide focus and guidance to designing subsequent instruction (Dick et al., 2005), and become the touchstone for repeatedly assessing the coherence of this instruction.

Consistent with this thinking, the Workshop facilitators’ primary orientation is that student learning should be the focus for teaching decisions, and development of their teaching practices. The twofold purpose of learning outcomes within the Workshop is to (a) clarify instructors’ expectations of their students’ learning, and (b) convey to students clear expectations about their learning. While clarity is the focus, prescriptive and rigidly structured learning objectives are not used as a model. Rather, participants are encouraged to develop learning outcomes using words and a structure that makes sense to them as long as the outcome is stated from the perspective of student learning. One of the frameworks introduced to participants (in addition to the classic taxonomy developed by Bloom, 1956) originates from research surveying how

professors typically describe the learning they expect, and classifies cognitive learning as knowing, understanding or thinking (Erickson & Strommer, 1991).

### **Instructional Strategies for student learning**

Workshop facilitators encourage participants to design instruction "... that will support, encourage, and motivate student learning" (Amundsen, Winder, & Gandell, 2004, p. 71). As discussed above, they ask participants to frame their teaching from a learning-centred perspective, to make intentional, reasoned decisions about teaching and learning activities that will best accomplish the desired student learning, to consciously align their teaching and learning activities in and out of class, and online with the course content and learning outcomes. Participants are encouraged to think about how they teach, and why they teach that way. Facilitators highlight that:

... a learning-centred perspective is not embodied by one or two particular teaching methods or activities, nor does it necessarily exclude any particular method or activity. [We] draw participants into a process of analysis whereby they do not judge any teaching method (e.g., lecturing) as intrinsically good or bad. [We] ask them instead to consider the characteristics of various teaching and learning methods, and to then determine their appropriateness relative to the learning they want students to achieve. (Amundsen, Winer & Gandell, 2004, p. 71)

Workshop facilitators point out that in considering various disciplinary contexts, learning tasks are likely to vary. Hence, it is appropriate that a variety of instructional approaches should be used to encourage these different kinds of learning: "rather than promote a 'right way to teach,' [facilitators] emphasize the importance of using a variety of methods that are more likely to promote intended

learning" (Amundsen, Winer, & Gandell, 2004, p. 90). This task, seemingly straightforward, tends to be complex in practice.

### **Assessment of Student Learning**

Professors have substantial experience with assessing student learning, however, this experience often tends to be unsatisfying for both professors and students. Needs assessments, completed by participants before the Workshop, list many of their concerns related to this area. The Workshop facilitators' goal is to "arm participants with a framework that will assist them in assessing the strengths and weaknesses of evaluation methods for the course they are designing and for learning situations in general" (Weston & McAlpine, 2004, p. 95). In order to do this, and honour the inherent complexity of assessing student learning, they discuss participants' concerns and questions within a larger context of basic concepts including, but not limited to: formative and summative evaluation, reliability and validity, and formal and informal assessment.<sup>8</sup>

### **Alignment of Course Design Elements**

The idea of alignment<sup>9</sup> in course design refers to the links between the course design elements (analysis of course content, learning outcomes, instructional strategies, and assessment strategies, as shown in Figure 1-1: Concept Map of the Workshop). Hence, for example, do the assessment strategies evaluate the

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<sup>8</sup> The importance of the role of feedback and practice (which play a large role in formative assessment) originated within behavioural and cognitive psychology, and is attributable to various learning theories.

<sup>9</sup> Though very visible within Instructional Design, the origins of the idea of alignment can probably be traced to the general systems approach's (Richey, 1986), and its notions of order and planning, and the presence of an inherent sense of purpose; this is one of four fields which provide Instructional Design its conceptual roots.

stated learning outcomes? Are the instructional strategies appropriate for the kinds of learning an instructor wants to encourage?

Leacock and Nesbit (2007) point out that:

As evaluators of instructor-designed university courses we have frequently found substantial mismatches between learning and assessment activities, most notably where students were tested on concepts and procedures that were only distantly related to the course's learning activities and presentations. (p. 46)

There also exists some empirical evidence indicating the advantage of aligning course design elements. For example, Cohen (1987) suggests that improving instructional alignment can result in effect sizes (in student learning) ranging from 1 to 3 sigma. The Workshop stresses such alignment at each step of the Workshop, towards developing a coherent course design, as suggested in Figure 1-1.

#### **1.4 Research Objectives, Perspective, and Questions**

My research aims to go beyond the often criticized satisfaction ratings, or happiness indexes, discussed earlier in this chapter, and to investigate the impact of the Workshop through the analysis of course outlines produced by participating professors before and after their Workshop experience. A comparative analysis of the two course outlines is one way to assess how professors' thinking changes (or not) over the course of the Workshop and how that is represented to students through the course outline. I pay specific attention to the central Workshop concepts, in this comparative analysis.

A course outline is an instructor's concrete, highly contextualized plan for the upcoming course. McAlpine and Emrick (2003) call them a 'contract' between an instructor and his/her students for the upcoming course, a link between thinking about teaching and actual practice. Continuing this line of thought, I have argued (pg. 6) that course outlines can be considered a preliminary theory-in-use. Sandretto, Kane, and Heath (2002) go a bit further and indicate that course outlines can reasonably be accepted as one view of an instructor's "theory-in-use" (p. 137).

In the absence of classroom observation, I do not suggest that such evidence is an accurate indicator of how the course outline is actually implemented; classroom observation and an analysis of course documents, such as examination papers, would be needed to judge how closely participants' course outlines align with their actual teaching practice<sup>10</sup>. Neither does this research approach the essential, and more difficult, area of evaluating improvement in student learning based on a Faculty Development initiative. However, course outlines are a focused, concretized, contract related to forthcoming practice and I believe such research is an essential initial step towards evaluating Faculty Development initiatives.

As I embarked on the analysis of course outlines, I realized that I must first confirm that the concepts I sought evidence of in the course outlines were well grounded in the Workshop experience. In other words, were the Workshop's

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<sup>10</sup> There might be some differences between course outlines and implemented practice, as teaching practice itself will be dependent on context. For course outlines to completely align with practice would probably require an iterative process.

espoused key concepts (analysis of course content, learning outcomes, instructional strategies, assessment methods, and alignment between these elements) taught within the Workshop and therefore part of Workshop participants' learning experience? Such an analysis would provide evidence of a link between valued Workshop concepts, the Workshop experience, and one Workshop artefact, that is, participants' pre and post-Workshop course outlines.

The following research questions were posed:

1. Do the Workshop instructional artefacts such as the course-pack (provided to Workshop participants), the instructor notes (provided to Workshop co-instructors), and facilitators' daily PowerPoint slides, show evidence of key Workshop concepts such as explicit and well-defined analysis of course content, learning outcomes, instructional strategies, assessment methods, and alignment between these elements?
2. What evidence is there of change, as related to key Workshop concepts, between participants' pre- and post-workshop course outlines?



## **2: LITERATURE REVIEW**

### **2.1 Introduction**

In reviewing the literature for this thesis, I looked for literature related to the two main questions posed at the end of chapter one: literature on Faculty Development initiatives that (i) examined their practice for alignment with stated values and concepts, and/or (ii) incorporated participant artefacts in the analysis of impact.

This literature review covers the years 1994 – 2007. The literature for the years 1994 – 2004 came from our research group's review of the Faculty Development literature for these years. This literature base was further extended by me, for this chapter, for the years 2005 to 2007 - the details of this extension are explained in the following section. The methodology for both reviews was similar.

### **2.2 Search Methodology**

The purpose of our research group review was to situate our research team's Faculty Development practice and research within the broader literature and to systematically characterize what we found. Several sources were consulted including various online databases (for example, ERIC) and specific journals, to find relevant published and unpublished material. Criteria were developed to aid decisions about documents to include and not to include (See

Appendix A: Databases accessed & selection criteria for Research Team review). We considered both conceptual and empirical research.

Articles chosen for the review were distributed between four members of our research team. The research team member reading the article as a first reader filled in a summary table noting such information as their own name, the year, author, title, and a short summary of the article being read, a description of the Faculty Development activity, its length, focus, rationale, and the measures taken to establish effectiveness. Noted as well were perspectives about what was considered effective Faculty Development, and values and philosophies about what constituted effective teaching and learning in higher education. Lastly the contributions of the paper to understanding Faculty Development, at least from the perspective of the reviewer, were noted.

The team's review process continued, systematically including second and third readers to determine if the document was to be included in the review and into which characterization(s) it fit (the categories for this characterization emerged out of the review process). This process resulted in 77 documents being included in the review. For a more detailed discussion of the processes followed in this review please refer to Amundsen, Abrami, McAlpine, Weston, Krbavac, Mundy, & Wilson (2005).

This literature base of 77 studies was topped up by me for the years 2005-2007 following the same criteria as that used by the research group, although in this case I was the sole reader (See Appendix A: Databases accessed & selection criteria for Research Team review) In 'topping up' this review to 2007, I

used only electronically available journals. (A list of the journals accessed is included as Appendix B: Journals used for “top-up” review (2005-2007)). Thirty-six articles related to Faculty Development were added to the seventy-seven articles included by the research team. From the literature base of 113 (77+36) studies, I began to look for papers that were relevant to my two research questions.

### **2.3 Alignment of practice with stated values**

I did not find any literature outlining work similar to my first research question, i.e. literature that examined Faculty Development initiatives for alignment with their stated values. However, a few researchers, McAlpine, Amundsen, Clement, & Light (submitted for review) and Kreber and Brooks (2001) have emphasized the need for such work. Kreber and Brooks touch on this idea in their comment that “staff developers need to be aware of their programme goals, and to have gathered evaluation data relating to these goals” (p. 6), and suggest that finally, the outcomes of an educational development programme can be compared to these goals. McAlpine et al. (submitted for review), too, point to the importance of documenting the link between faculty developers’ espoused theories and theories-in-use, as a valuable way of understanding the work that we do as faculty developers.

### **2.4 Analysis of participant artefacts**

I had greater success in finding literature that related to my second question: describing initiatives that (a) had a goal of improving teaching practice, and (b)

incorporated participant artefacts in their analysis of impact<sup>11</sup>. From the literature base of 113 (77+36) studies, 8 studies were select for further reading, that seemed to meet these very specific criteria. Table 2-1 provides basic information about the data collected in these studies. A discussion of the studies follows. In each case, I have outlined the goals of the initiative, the initiative itself, the data collected, analysis, and results. I have followed this up with a critique of the article, which usually looks specifically at the alignment of the goals with the data collected, and that of the data collected with the results outlined. In some instances, other problematic areas are noted.

**Table 2-1: Reviewed Articles**

Article	Data Collected
Hanson, S., & Moser, S. (2003). Reflections on a discipline-wide project: Developing active learning modules on the human dimensions of global change. <i>Journal of Geography in Higher Education</i> , 27(1), 17-38.	<ol style="list-style-type: none"> <li>1. 10 teaching and learning modules [ARTEFACT]</li> <li>2. Participant and other interviews</li> </ol>
Winton, P. J., & Catlett, C. (1997). <i>The southeastern institute for faculty training: A training model for systems change</i> (Descriptive. Chapel Hill, NC:	<ol style="list-style-type: none"> <li>1. Action plans collected from faculty (after the training?) [ARTEFACT]</li> <li>2. 6-month follow-up interview.</li> <li>3. Other data (doesn't say)</li> <li>4. Pre / post-intervention reports of faculty training practices</li> </ol>
Halliday, J., & Soden, R. (1998). Facilitating changes in lecturers' understanding of learning. <i>Teaching in Higher Education</i> , 3(1), 21-36.	<ol style="list-style-type: none"> <li>1. Transcripts of audio-recorded interviews</li> <li>2. Participants' reflective notes [ARTEFACT]</li> <li>3. Observation of teaching.</li> </ol>
Hyman, C. (1996). <i>Citizenship education in women's studies</i> (Descriptive No. P116A30439)	<ol style="list-style-type: none"> <li>1. A statistical survey</li> <li>2. Student surveys</li> </ol>

<sup>11</sup> The term artefacts is used here, to refer to anything created by Faculty Development participants during the Faculty Development initiative; for example, a course outline or syllabus, an action plan, a portfolio, would all qualify as an artefact for this purpose.

	<ol style="list-style-type: none"> <li>3. Focus group of teaching faculty and students</li> <li>4. Other (less related to this research)</li> <li>5. A qualitative report was generated using the original program proposal, general program materials, a student survey, relevant course syllabi [ARTEFACT], notes, articles of presentation by faculty, 2 sets of evaluation of the faculty development seminars, portfolios of student work, and a field experience handbook.</li> </ol>
<p>Goodnough, K. (2006). Enhancing pedagogical content knowledge through self-study: An exploration of problem-based learning. <i>Teaching in Higher Education</i>, 11(3), 301-308.</p>	<ol style="list-style-type: none"> <li>1. Field notes recorded during and after classes [ARTEFACT]</li> <li>2. Student generated documents such as students workshop plans, group products, individual journals,</li> <li>3. Informal conversational interviews during and after scheduled class sessions,</li> <li>4. Semi-structured interviews with seven student volunteers at the end of the course.</li> <li>5. Personal interview about her experiences using PBL as an instructional approach.</li> </ol>
<p>Brew, A., &amp; Barrie, S. (1999). Academic development through a negotiated curriculum. <i>International Journal for Academic Development</i>, 4(1), 34.</p>	<ol style="list-style-type: none"> <li>1. Telephone interviews</li> <li>2. Assessed components of the course were workshop style sessions, keeping a learning journal [ARTEFACT], assessed projects [ARTEFACT], and teaching improvement activities – unclear if these were used to evaluate faculty development.</li> </ol>
<p>Rowland, S., &amp; Barton, L. (1994). Making things difficult: Developing a research approach to teaching in higher education. <i>Studies in Higher Education</i>, 19(3), 367.</p> <p>Rowland, S. (1999). The role of theory in a pedagogical model for lecturers in higher education. <i>Studies in Higher Education</i>, 24(3), 303.</p>	<ol style="list-style-type: none"> <li>1. Module portfolios (participant assessment) [ARTEFACT]</li> </ol>
<p>Beaty, L. (1999). Consultation through action learning. <i>New Directions for teaching and learning</i>, 79, 51-58.</p>	<ol style="list-style-type: none"> <li>1. Portfolios [ARTEFACT]</li> </ol>

I did not find any actual 'document analyse' in my literature review, carried out in the singular way it was conducted in my research - that is, exploring themes within one or more participant artefacts using a priori and emergent codes. Hanson and Moser (2003) did however evaluate participant artefacts specifically to examine the impact with respect to the goals of a faculty development initiative.

Hanson and Moser (2003) discuss an initiative “aimed at changing the way instructors and students approach teaching and learning in certain key introductory geography courses” (p. 2). With an aim of creating introductory courses that incorporated cutting-edge research findings, the instructors involved in the project developed 10 teaching and learning modules over three years. The process for creating the modules was “collaborative, iterative, and time-consuming” (p. 20), and included a variety of people: a steering committee, University and Association project staff, module authors who created the original modules, workshop participants who reviewed and revised the modules to increase flexibility and accessibility, and global change and pedagogy experts. The modules were tested by workshop participants in the semester following a workshop, after which they and their students provided suggestions for further revisions to the modules.

The project was evaluated formatively and summatively. Formative evaluation constituted feedback on modules and workshop evaluations by workshop participants and project staff. The summative evaluation was provided by an external evaluator who reviewed the modules, however no details are provided about how the review was undertaken, or what it entailed.

This was a well done, comprehensive, and complex project. It is interesting though, to look specifically at the goals, the data collected, and the reported findings of this project. The first goal was to strengthen “student and faculty understanding of human dimensions of global change” (p. 5). Certainly, the process used to ensure this strengthened understanding was to involve

cutting edge scientists in the project, and the external evaluator indicates that this goal was met. It might also have been possible to judge improved faculty understanding by comparing the modules to previous faculty courses. However, the data collected does not support a discussion of improved student understanding, and neither does the article outline how this strengthened student understanding was evaluated, though it is reported as happening. The second goal was to “get away from the straight lecture format in introductory courses... and develop instructional materials that actively and collaboratively engage students in the learning and research processes” (p. 5). It is worth noting that this goal has two parts: (a) to move away from the straight lecture format, and (b) to develop instructional materials that engage students in learning and research. The article provides details about the underlying principles and pedagogy used for module development, which suggest that the modules did follow through on this goal. The creation of modules is a move in the direction away from the lecture format; however, there was no data collected and therefore no evidence presented that would indicate if less lecturing was done or if there was student engagement in learning and research processes. The third goal was to “enliven discussion about teaching and learning within geography” (p. 5). Based on the feedback from workshops, and the interview quotes from participants, it would seem that this goal was certainly achieved. In addition, the article indicates that both workshop participants and module authors continue to be involved in discussions and developments of active learning materials in the discipline. Once again however, the article does not clearly state how many participants stayed

involved, and to what extent. The fourth goal was to “establish a process within the Association of American Geographers ...for the continued development, evaluation and dissemination of these and other active learning materials for college and university teaching” (p. 5). There does not seem to be a process in place for the continued development and evaluation of such modules, however, with regard to dissemination, the ones developed during this project are available through the AAG’s website. The authors and the external evaluator agree that meeting this goal will continue to be difficult.

Another critique of this project is, that most of the evaluation was carried out at the levels of participant satisfaction, and perhaps informally at the level of student perception of teaching performances. It should be kept in mind that earlier reviews have complained about the abundance of participant satisfaction ratings being used as evaluations, to the exclusion of other levels of evaluation, and have stressed the importance of moving beyond these.

Four studies I reviewed collected a variety of different types of participant artefacts along with other types of data. For example, participant artefacts along with interview data (Winton & Catlett, 1997), interview data and classroom observations (Halliday & Soden, 1998), other program materials (Hyman, 1996), and student work (Goodnough, 2006). The analyses of these different data types was done as a whole, that is, there was not a clear division between the analysis of participant artefacts, and that of other data, such as interviews, classroom observations, or other program materials.



Winton and Catlett (1997) describe a South-eastern Institute for faculty training (SIFT) that was designed to assist 15 South-eastern jurisdictions in addressing a shortage of well-trained early intervention personnel to serve young children with disabilities and their families. The SIFT project followed a systems-change approach, and “implemented their model with one cohort of five states per year” (p. 8). Groups of faculty representing multiple disciplines, cultural diversity and family members were selected by SIFT State representatives, and invited to be part of the initiative. Participating faculty included practica supervisors and adjunct instructors; 191 faculty from 15 States and 16 different disciplines participated in the Institute. A needs assessment was carried out with the faculty involved, and the results, along with State priorities identified by the State leaders, were used to shape a four day faculty training institute.

The institute included 30 to 35 instructional sessions, and was facilitated by content experts who were also highly recommended for their training expertise. Participants were asked to identify short and long term action plans, and created long term action plans at both, an individual level, and as teams at the state level.

SIFT provided ongoing support for 6 months after the training institute. This support consisted of (a) sponsoring two meetings between State faculty and the State leader; the second meeting focused on evaluating the state action plan, identifying barriers and facilitators to its success, and next steps, and (b) ongoing telephone and newsletter technical support for institute participants.

This initiative was multi-level, and had various goals, and in discussing the results I outline only the specific goals of interest to my research and discuss the findings related to each goal:

The first goal discussed the increase of higher education faculty members' knowledge and skills related to providing effective and innovative in-service training. The article indicates that data suggested the institutes were successful in their short and long term outcomes related to this goal. In addition:

These data showed increases in faculty knowledge and skill in all 17 early intervention content areas and training strategies measured (significant differences between pre and six-month post). The faculty also showed a statistically significant increase in their commitment and willingness to participate in community-based, early intervention in-service training and technical assistance and, in fact, did increase the amount of in-service training they provided after participation in the ...training project. This commitment was made despite the fact that in-service training is not a primary part of a university faculty member's position. (p. 14).

There is no clear indication about what the 'pre' data were, and whether the post data referred to, is the 6 month telephone interview follow up on the action plans. Further, no details are provided about how these data were analyzed.

The second goal was "to assist faculty in embedding state-of-the-art information related to ... [the infant-toddler program] content and training into the in-service training they provide to practitioners" (p. 5). The authors suggest that the pre and six-month post comparison of reports of faculty training practice indicate that the new knowledge and skills that faculty were taught were applied to their practice, and the training faculty provided to early intervention personnel

improved from pre to six-month post the faculty development, with regard to quality indicators previously identified by the project:

Specifically, participants were more likely to provide training that was coordinated with their state's CSPD plan, was endorsed by administrators, was attended by administrators, included experiential activities and modelling and demonstration opportunities, used strategies for applying training ideas to the workplace, used training strategies that were varied to meet different learning styles, included action planning (trainees identified specific ideas/practices that they would try). (p. 13)

Content analysis on the six month follow up telephone interviews explored facilitators and barriers to previously created individual and State action plans; 162 participants responded. The results as per the article, suggest that personal relationships and mutual support had been forged through the project, and this support of colleagues and follow up support from SIFT had facilitated participants in accomplishing their goals. The barriers identified to accomplishing these individual action plans were lack of time, competing responsibilities and priorities, and bureaucratic red-tape.

Once more, pre/post data is mentioned as evidence for these results, however, in addition to not knowing what specifically these data are, there is no information on how these reports were compared to come to the conclusion that the new knowledge and skills faculty had gained were applied to their practice. Further, there are no details provided about the methodology followed for the content analysis. A clearer division between the analysis of participant action plans and other data would have been helpful in understanding what participants had intended to do, at the end of the workshop, and what they actually did

(based on their interview self report). This information, along with a discussion of the variables impacting the implementation, would have provided a rich discussion of the impact of such an initiative, and the implications of specific variables on this. Without this additional detail it seems that the action plans were not really required for the analysis, except as a reference point for the participants themselves.

The third goal of interest to us is that of evaluating the “impact of the training model ...on faculty participating in the Institute, and on direct service providers they in turn provide with training” (p. 5). First of all, it is not clear what sort of impact was to be examined. The authors state that “all planned project activities and procedures were accomplished in a timely manner” (p. 15). It is suggested that measures to evaluate impact on participating faculty can be drawn from the above discussion of the first two goals. As mentioned there, information related to the evaluation of this initiative is lacking in a variety of ways, and does not provide us with evidence that this goal was accomplished. In addition, there is nothing in the data collected, or in the findings related to the other goals to indicate an impact on the direct service providers that the faculty provide training to. As such, it would seem that this part of the goal has not been evaluated at all.

In terms of alignment of goals with the data collected, this initiative had goals at the levels of faculty knowledge and skills, faculty practice, and student learning. However, as per the data outlined in the article (short and long term action plans at the individual and state level, and six month post-telephone interviews), it is unclear how faculty knowledge and skills could have been

evaluated. It is unclear too, how participant practice was evaluated; though the action plan could be used to evaluate participant practice, there seems to be nothing to compare this against other than the information provided during participant telephone interviews. If these were used for the comparison, this is problematic as the interviews (self reports) do not denote teaching practice (a theory in use) but could indicate participants' conception and beliefs about teaching or espoused theories of teaching (Argyris & Schon, 1974; Kane, Sandretto, & Heath, 2002).

Halliday & Soden (1998) describe an initiative in which lecturers were encouraged to develop their own theoretical perspectives on teaching, and to approach their teaching on the basis of this theoretical understanding. The course was 9 months long, and participants, higher education instructors who had taught for at least 2 years, were asked to keep a written record of their reading and to "try to re-interpret their practice in the light of the insights that they gained from their inquiry. All written course work was integrated with the lecturers' day-to-day teaching of their normal timetable" (p.4). During the course, each participant met individually with the authors four times and with each other at least twice, following a teaching observation of one of their classes. Each participant also participated in eight one-to-one interviews with the course authors, where they were asked to explain how their reading informed their every day practice. Based on participants' written records, the interviews explored questions regarding what participants wanted their students to learn overall, what

was involved in such learning, how the participants' teaching enhanced this learning, and how their values and experience enhanced their understandings.

Various data were collected during the course, such as transcripts of audio-recorded interviews with participants, participants' reflective notes, and observation of teaching. The purpose of the analysis was to show the progress of the participants towards integrating theoretically defensible justifications for their teaching. The interview transcripts were coded using emergent coding. The reflective notes (participant artefacts) were used in the analysis, but it is unclear how they were analyzed. The authors say that 'lecturers justifications (oral and written) were always related to recent teaching behaviour patterns [classroom observations]' (p. 6) to avoid researcher tendency to report the types of changes they would like to see.

The authors found that certain codes<sup>12</sup> were mentioned by more lecturers, and others codes by fewer lecturers, as the months progressed. The codes that were mentioned by more lecturers were: *statement of values* (number of lecturers using this justification in the interview months were: 2, 4, 7, 8); *justifications supported by literature* (number of lecturers using this justification in

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<sup>12</sup> The codes used by the authors in coding the interviews carried out with participants, at four different times during the course were: (i) statement of values such as fairness, rigour, equality; (ii) lecturers' past experiences that influence their teaching; (iii) evidence of technicism; (iv) second level justifications unsupported by references to literature – "responses to the question 'how do you know this?'... might be I learn things this way myself"; (v) second level justifications integrated within appropriate literature – "I am quite persuaded by the ideas of McPeck and Bonnet – content is everything"; (vi) overall purpose of learning characterised as acquisition of facts or being able to perform specific discipline related tasks; (vii) overall purpose of learning characterised as broad intellectual development; (viii) process of learning characterised as literal recording on the mind; (ix) process of learning characterized as meaningful reception of knowledge from an expert; (x) process of learning characterised as dialogue.

the interview months were: 1, 3, 7, 11); and *overall purpose of learning: broad intellectual development* (0, 0, 9, 9); *learning as dialogue* (0, 0, 6, 8). Codes that were brought up by less lecturers over the months were: *past experiences which influence their teaching* (11, 11, 2, 2); *evidence of technicism* (11, 6, 6, 3); *overall purpose of learning: acquisition of facts or being able to perform specific tasks* (11, 11, 3, 2); and *process of learning characterised as literal recording on the mind* (7, 7, 1, 0).

The authors indicate that the control group responses were strikingly different from those provided by participants, though they hesitate to say more as the control group data was collected from one interview conducted at the end of a course.

This study reports some interesting results about changes in instructors' justifications of their teaching practice over the course of a faculty development initiative. The alignment between the goals of the program and the data collected seems well matched. However, there is lack of clarity about how the different data types were analyzed or how they were combined. This is unsatisfying, as it does not show us the distinction between participants theoretical understanding (perhaps from their reflective notes and interviews), and their teaching based on this understanding (perhaps from interviews and observations). Such a division would have given a clearer picture of a) what their theoretical understanding was, at different points, and b) how well this theoretical understanding was integrated with their teaching practice.

Hyman (1996) also analyzed participant artefacts along with other data in an initiative aimed primarily at students, but that also included a faculty development component. This study had three parts: faculty development, curriculum development, and community outreach, and its goal was to promote students "effectiveness as citizens in their communities by integrating concepts and skills of active citizenship and community action into the women's studies curriculum...[It] prepared faculty to work as teachers and mentors in... students' development as community activists" (p. 4).

The faculty development component consisted of a 3-day long seminar on citizenship and women's studies and a week long seminar "designed to give participants the opportunity to develop course syllabi" (p.10), course materials, and revise existing courses. About twenty faculty members participated in the faculty development workshops.

The project was evaluated along two lines: (a) using a survey of the University students, and Women's Studies (WS) students in particular, to examine the impact on their orientation towards social change and community action, and (b) by way of a qualitative review, undertaken by an external evaluator which used the original program proposal, other general program materials, a student citizenship survey, course materials (relevant course syllabi, notes and articles of presentation by faculty), three sets of evaluations of the faculty development seminars, portfolios of student work, and a field experience handbook. The evaluator also conducted interviews with senior administrators on campus, and four focus groups with students, and faculty teaching core, core



disciplinary, and elective courses. The purpose of this evaluation was to “examine participants’ experience of the project and to explore how participants weighed the influence of the project on their teaching and learning” (p. 21). Each of these evaluations is detailed next.

The survey data is self-reported, but the authors suggest that it does provide evidence of the successful implementation in that Women’s Studies students reported having more confidence in their skills, a sense of empowerment about making a difference in community issues, and were less likely to ignore various issues, than first year, or other, University students. The issues that all students seemed more concerned about were those of education, homelessness, the environment, and child abuse.

This self report survey data that indicates WS students’ greater involvement with issues is problematic, in that the survey compares WS students with first year students and the University students overall. The first year students seem to be general, non WS students, though this is not completely clear. In comparing these students, attention needs to be paid to the fact that WS students may be inherently more activist, an idea that is not considered at all. The survey results are not compared against any other results, so a strong case can really not be made about students community involvement based simply on this survey.

The qualitative report conducted by the outside evaluator provides a ‘thick description’ of the results; the data were analysed and reported around three major themes: collegiality as an outcome of the project, faculty and students’

reflections on the influence the project had on teaching, and the views on how the project influenced the students. The report points out that each of these themes impacted the success of the main goals for this project. It should be noted that there is no information provided about how the external evaluator came to decide these three themes.

This is a comprehensive report, suggesting substantial positive results. Some critiques come to mind, though it should be kept in mind that such large scale initiatives are difficult to get started, implement, and evaluate. As such some of these critiques could be a consequence of the context. The results outlined by the external evaluator are discussed below.

The external evaluator points to a power lunch faculty group as indicating greater collegiality amongst faculty. Evidence of student collegiality is provided by including a few student quotes, which is weak evidence for this claim. Examples of actual increased student collegiality, as provided in the case of faculty, would have been useful.

In discussing the development of new courses and revision of old ones, the evaluator provides some examples; specifically, he indicates the types of questions that students were being asked, which clearly encourage community engagement. However, once again, we have no idea about how many courses were developed or revised, and whether we could expect to see these types of changes in all, or some, of the newly developed or revised courses. This lack of information leaves me wondering about the extent of the change in faculty courses.

The evaluator discusses how citizenship concerns have been infused into the curriculum, and reports on students' engagement and interest, but provides only faculty quotes in support of these ideas. Curriculum and student artefacts would have substantiating these claims far better. It is interesting to note that though program materials and portfolios of student work were collected as data for this evaluation, neither is mentioned here.

Lastly, the survey used by the external evaluator (probably the citizenship survey mentioned in the data, but this is not made clear), is not attached, so I am unable to discuss whether the evaluators comments related to student outcomes are justified.

This lack of information makes it difficult to confirm the reliability of the external evaluation; the project seems to have had a positive impact and greater clarity around its evaluation would have been an excellent contribution to the faculty development evaluation literature. In terms of the alignment of the data collection methods with the goals promoting students "effectiveness as citizens in their communities by integrating concepts and skills of active citizenship and community action into the women's studies curriculum" (p. 4), data such as program materials and student work portfolios collected in combination with faculty and student focus groups interviews, were a good combination. However, this data does not seem to have been used as rigorously as it could have been.

Goodnough (2006) reports on a classroom based action research self-study with several aims: a) to explore problem-based learning (PBL) as an instructional approach, b) to improve [the author's] classroom practice and her

understanding of that practice, and c) to immerse students in authentic learning experiences that would encourage them to adopt an inquiry-based approach to teaching and learning.

The context of the first iteration of the study (described in this article) was a three credit 'Advanced studies in Science Education' undergraduate education methods course. This course is mandatory for the middle / high school teaching certification. The course had thirty-three students, of which twenty-eight participated in the study. The students were 21 to 40 years old, and most had limited K-12 teaching experience. Approximately two-thirds of the course was devoted to PBL.

Goodnough used a variety of data sources: field notes recorded during and after classes describing classroom events and her interpretation of those events, student generated documents such as students' workshop plans, group products, individual journals, informal conversational interviews during and after scheduled class sessions, semi-structured interviews with seven student volunteers, and an interview about her experience using this instructional approach, carried out by a colleague well versed in the PBL.

Data analysis coincided with data collection in the study; in studying her practice the author used the idea of pedagogical content knowledge to guide her reflection and learning, and "engaged in self-reflective spirals of 'planning, acting, observing and reflecting, with each of these activities being systematically and self-critically implemented and interrelated' (Grundy, 1982, p. 23)" (p. 307). She used a grounded theory approach to data analysis, using the constant

comparison method to create codes and categories, and she provides some detail about this process. All data seems to have been analyzed together but no further detail is provided in the article about the codes or categories, or about how the analysis was carried out or the different types of data combined.

In her discussion of the results, the author speaks about the transformation of her pedagogical content knowledge through the engagement with PBL. She structures this discussion of the influence of PBL on her pedagogical content knowledge around Magnusson et al.'s (1999, as cited in Goodnough, 2006) five types of PCK:

(i) Orientations to teaching - ways of viewing subject teaching that guide instructional decision making: Goodnough realized that she needed to attend carefully to the nature and complexity of problems provided to students; however, student quotes used in the article make clear that these students found the problems relevant and engaging. The student reflections supported the Goodnough's "belief in PBL as an instructional approach that fosters exploration and examination of complex teaching issues from multiple perspectives. [Her] rationale for choosing PBL as an instructional strategy is consistent with [her] beliefs about how students learn" (p. 9).

(ii) Knowledge of curriculum and outcomes in and across courses and programs: Goodnough suggests that engaging in the curriculum development and implementation for her course "became an impetus to reflect further on the nature and goals of the [traditional] teacher preparation model" (p. 10) being used in their faculty in contrast to PBL, which offers an alternative real-world,

authentic approach. Little further detail is provided about what such an approach and model might look like.

(iii) Knowledge of student understanding – an instructor’s insight into the kinds of “pre-requisite knowledge, abilities, and skills students need to learn particular topics” (p. 6), and what concepts and ideas are problematic for students: Goodnough believes she gained insights into several aspects of student learning, as this was an essential part of supporting students’ work in a PBL environment: (a) one such insight was the impact of instructor versus student choice of PBL topics on student motivation, and her consideration of what was a good balance between these two ideas; (b) another was the issue of problem design due to varied problem complexity, and the differing intellectual demand problems placed on students; (c) an insight into certain student difficulties – some students were unable to understand how to teach science content using a variety of instructional methods, and felt that some methods were not useful to science teaching.

Goodnough reports that twenty one of the twenty-eight students enjoyed their experience learning with PBL, and found it motivating, four disliked it, and three were ambivalent. Goodnough provides examples from students’ journal entries to give a sense of their responses in this context. She reflects that perhaps PBL did not match all students’ learning styles, and could in future be one of many instructional strategies in a course. She indicates ways in which she responded to this insight in her next course.

(iv) Knowledge of assessment – an instructors' understanding of what types of student learning is important to assess, and what are the appropriate methods to assess these: assessments in this course included “an individual journal, the creation of a group product of choice, and the delivery of an eighty-minute workshop” (p. 12). Though Goodnough found the workshops well developed, four out of seven showed a lack of variety related to instructional strategies, and students didn't leave enough time for discussion and feedback. Though twenty-six of twenty-eight students found the workshops useful to their learning, Goodnough suggests that this learning depended on the quality of the workshops.

She points out that selecting assessment methods for PBL requires careful thought and indicates how in her continued use of PBL she has tried to design assessment that “incorporate a product of choice that required students to show evidence of how to integrate science content, pedagogy, and differentiation strategies” (p. 13). Though she believes, that students in this first iterations of the course met their learning outcomes, she is unsure the extent to which this translated into their practice.

(v) Knowledge of instructional strategies – the kinds of strategies best suited for a discipline and for particular topics and issues: one example Goodnough shares in this context relates back to an earlier discussion of the varied complexity of different problems. Some groups had to spend too much time on their problems, while other had too much time available. In another example, while the author felt that overall the groups had functioned equitably,

she was surprised to learn from a student journal that one group had fallen apart towards the end of the process, due to group dynamics. As a result, this is a special focusing in her current PBL self-study.

The data collected (field notes, various student generated documents, conversational and semi-structure interviews) in this study seems valid for evaluating the goals of the study, and the results discussed in the article are well described and grounded in the data. The one critique of this study, mentioned earlier, is the lack of detail about the actual codes used in the analysis, or of the analysis methodology itself.

Brew and Barrie (1999) discuss an initiative with a goal to develop 'professional higher education teachers'. The idea of professional practice seems to be based on nine principles of teaching and learning in academic contexts, taken from the literature: (i) course organization and teaching processes should match the course content, (ii) courses should provide for individual differences, (iii) teachers should reflect critically on their practice to improve it, (iv) assessment should encourage and support learning, (v) changes in practice come with changes in conceptions (Gibbs, 1995, as cited in Brew & Barrie 1999), (vi) participants are recognized as mature professionals and skilled learners, (vii) teaching and assessment were planned around a cohesive group to encourage peer learning, (viii) the organizational contexts within which participants function, and the constraints this brings, should be recognized, and (ix) there should be a commitment to equity.



A postgraduate certificate course was developed that used a negotiated curriculum; that is, the course was organized centrally as the developers wanted to ensure a good coverage of issues required to meet university and accreditation standards, while also ensuring that the curriculum was relevant to course members' needs and context. Assessed components of the course were workshop style sessions, keeping a learning journal, assessed projects, and teaching improvement activities.

A case study approach was used to evaluate the course over three years. Telephone interviews were used as part of a summative strategy to evaluate the long term impact of the course on participants' careers and teaching activities. These semi-structured interviews were carried out with graduates of three years (1995-1997), and asked about participants' "perceptions of their individual learning outcomes and report of changes in their teaching arising from participating in the course" (p. 3). Fourteen of the original nineteen participants were available for the interviews, while the others had either left the university, or were on leave. All but one respondent reported that the course had "significantly affected their work as a university teacher" (p. 3). No further details are provided about the content or analysis of these interviews.

In analyzing the initiative, the authors discuss the nine principles of adult teaching and learning underlying the course, and how each of these principles were, indeed, visible in the course. Student quotations and outcomes of student projects were used to indicate both, the presence of these principles, and the long term impact of the project. For example, the authors suggest that outcomes

of assessed projects demonstrated that the course provided for individual differences and another example provided is how participants' reflective writing showed evidence of critical reflection.

In considering the alignment between the goal of this initiative (to develop professional higher education teachers and provide them with a basis for professional practice), and the data collected (telephone interviews, and participants course work that included workshop style sessions, a learning journal, assessed projects, and teaching improvement activities), it is important to remember that the idea of professional practice was structured around the nine principles of teaching and learning earlier outlined. So in considering alignment, it is also useful to consider how those principles can be evaluated.

The nine principles, however, relate to what the faculty development initiative itself would look like, rather than to the outcomes for participants of the initiative. There is, in fact, a sense that professional practice would look very different for different people. Some of these nine principles can be assessed by examining the types of participant artefacts collected (for example, the presence of critical thinking), while the assessment of others (the course organization and teaching processes as appropriate to the content) would need artefacts related to the initiative. These were not part of the data set. In the absence of such data, the authors revert to a general discussion of the presence of these ideas in the course, and other than student quotes, no other evidence is provided. Though interesting, this is not a rigorous evaluation of the initiative.

The telephone interview looks simply at participant perception of the course. In the absence of a single definition of the idea of professional practice, participant perception of the value of the initiative is probably a good way to examine the relevance of the program.

Rowland and Barton (1994) and Rowland (1999) describe a faculty development initiative (two inter-connected papers) with various goals including, a) to make practice public, b) to understand how students in various disciplines perceive their learning experience and the subject matter, c) to develop the educational values which lie at the heart of educational practice within the disciplines, d) to develop a research community to test new ideas in teaching, e) to relate teaching to research, and f) to develop strategies for self-evaluation. The course strove to address “practical and technical matters” (Rowland & Barton, 1994) that arose from participants’ investigation of their own practice, and aimed to raise certain fundamental questions about pedagogy.

The course was planned with twelve participants and two tutors, and constructed around four term modules followed by independent work. The meetings for each module took place just before or after each academic term, along with five fortnightly afternoon meetings during the term. Between meetings, participants were “expected to make observations and interpretations of their own teaching, try out different strategies in light of these, and thereby develop their ongoing projects” (Rowland & Barton, 1994). The authors envisaged providing a structure for this process initially, but hoped that participants would develop their “own characteristic lines of enquiry” as the course proceeded.

Participants used personal research diaries for critical responses to the literature they read, observations and interpretations on their teaching, responses to group discussions, and comments evaluating the course. These diaries formed the basis for participants' module portfolios. The portfolios were submitted at the end of each module, and assessed on a pass/fail basis – however no details are provided about the basis for this assessment.

In discussing the results of this initiative, the authors raise certain questions about the nature of teaching in a university system and suggest that participants had begun to influence practices in their departments and publish in professional journals based on their work in this course. However, once again, no concrete evidence is provided for this.

In considering the alignment between the goals and data collected in this initiative, it would seem that the goals are more suited to an analytical discussion, than to being checked against data. However, if data were to be gathered to evaluate these goals, this initiative was lacking in some ways: a) the goal to make practice public could have been discussed in light of publications or conference presentations by the participants, but there is no mention of this; b) the goal to understand how students in various disciplines perceive their learning experience and the subject matter, could have been examined through interviews or discussions centering around participants research diaries, but again, no such discussion is put forward; c) with regard to the development of educational values which lie at the heart of educational practice within the disciplines, it is possible to gather, anecdotally, that the initiative was moving towards developing

these ideas; however once again, there is no formal articulation or discussion of this in the article; d) the goal to develop a research community to test new ideas in teaching is the only one that is specifically referred to later in the article. The group's movement away from a teaching-learning dynamic, and towards a peer group managed structure indicates a firm move towards this goal; e) the goals to relate teaching to research; and f) to develop strategies for self-evaluation: again, anecdotally both these goals might have been met, but there is no formal discussion of this in the article. Though an interesting article conceptually, it does not really advance our understanding about the evaluation of faculty development practice.

Beatty (1999) described a one year long program that included two half-day workshops based on action learning. The initiative was designed to allow experienced higher education teachers to gain the qualifications required to become members of the Institute for Learning and Teaching by presenting a portfolio "that documents evidence of the teacher's professional practice" (p. 6).

The action learning sets (up to seven members) met for three hours each month. After each meeting action points were recorded for each set member, and between meetings participants recorded "their reflections on teaching events and gather[ed] evidence from practice for their portfolio[s]" (p. 7). Participants received constructive feedback from peers and their instructors, and these comments, together with participants' reflections and follow up actions, became part of their teaching portfolio. The portfolios were self-assessed against the accreditation requirements by the participants themselves, and later by the set

adviser and another member of the team, before being submitted for validation to the Institute for Teaching and Learning. Neither the accreditation requirements used for assessment, nor the self-assessment process, are explained any further. It would seem that this initiative was primarily a structure to support experienced faculty to build and submit their portfolios for accreditation, and the faculty development that takes place within the initiative is incidental in the development of the portfolio.

## **2.5 Conclusion**

My research study seeks to examine whether (i) the concepts valued by Workshop facilitators were part of the participants' Workshop experience, and (ii) what evidence there is of change, as related to key Workshop concepts, between participants' pre- and post-Workshop course outlines. In reviewing the literature with respect to the first question, I found no published work with this focus, although a few researchers have suggested the value of faculty developers examining coherence between what they value and what they teach, as one way to evaluate their Faculty Development work.

It is important to note here that based on this lack of literature it is apparent that even if faculty development initiatives choose to evaluate their work, they are assuming that there is alignment between what they want to teach in a faculty development workshop, and what they actually do teach. This in itself is problematic, as we know from earlier research (Argyris & Schon, 1974; Kane, Sandretto, & Heath 2002) that espoused theories about teaching often differ from actual theories in use.

In reviewing the literature related to my second question, I looked for initiatives that, with a goal of impacting practice, incorporate participant artefacts in their analysis of impact. This process resulted in eight articles. None of these articles described a document analysis per se, although they did collect participant artefacts and use them in a variety of interesting ways.

Firstly, although some initiatives continue to fall back on satisfaction ratings (for example, Winton & Catlett, 1997; Hyman, 1996), most are collecting varied data as they attempt to understand the impact of their initiatives. However, some comprehensive initiatives I reviewed fell substantially short in their evaluations (for example, Hanson & Moser, 2003), and as such missed valuable opportunities for adding to our understanding of the difficult area of faculty development evaluation.

Certain initiatives did not outline clearly how the different kinds of data were used, nor describe the analysis in ways that were transparent. This critique, regarding lack of clarity about the methodology, could be levelled against all of the articles I reviewed. There was a tendency among authors to *suggest* that certain types of research or evaluation methodology had been used, but then neglect to describe them in any substantial detail.

Other initiatives analyzed various different types of data together. This might be useful in some instances, but here it tended to cloud our understanding of the faculty development participants' thinking or practice. One initiative reported on changes to course materials (Hyman, 1996). Though some examples were provided about the types of changes found in these course materials, the

analysis is looser than desired, and leaves me wondering about how many instructors made these changes, what the themes of the changes were, and how these compared to instructors' earlier course materials.

Some studies showed less alignment of goals, data collected, and results (for example, Winton & Catlett, 1997), than others (for example, Goodnough, 2006). Some initiatives, while showing alignment between goals and the data collected, fell short of using this data rigorously in evaluating their goals (Hyman, 1996). In certain instances there was no data to back up some results indicated (for example, Winton & Catlett, 1997; Hyman, 1996). Two initiatives, while interesting, provided almost no evaluation of their initiative (Rowland & Barton, 1994; Beaty, 1999)

I would argue that both the questions being pursued for this thesis research, and the methods used to research them, are a contribution to the present Faculty Development literature. In the case of the first question, there appears to be no other published work in the area, while certain recent researchers have called for this type of work.

For the second question, my study uses data firmly grounded in a Workshop experience as a base to examine participants' pre and post-Workshop course outlines. In pursuing the second question rigorously, and transparently, using a document analysis, we are able to compare the differences between the pre and post-Workshop course outlines, and discuss the implications of these differences. In addition, the methodology followed is clearly detailed to ensure that readers have a clear and transparent idea of the analysis. The methodology



itself, doing a document analysis on participant artefact, seems a somewhat different way to approach faculty development evaluation, which shows potential to provide clarity in such evaluations.

In addition, this thesis research carefully aligns its goals, the data collected, and a discussion of the results.

### 3: METHODOLOGY

#### 3.1 Introduction

This thesis is a document analysis situated within a larger research project which aligns with Naturalistic Inquiry (Lincoln & Guba, 1985). When considering which research methods to use, it is valuable to consider foundational assumptions of existing paradigms of inquiry, to ensure understanding, and personal, and contextual congruence with such underlying assumptions of paradigms that we choose to work within. As this thesis research is embedded within a larger Naturalistic Inquiry, I first discuss the larger research project and its congruence with Naturalistic Inquiry before going on to detail the specifics of document analysis as used in this thesis study.

##### 3.1.1 Underlying Assumptions

The assumptions underlying positivist and naturalistic inquiries are juxtaposed in Table 3-1. This thinking, emerging in the 80s, helped provide a way of articulating challenges to positivism.

**Table 3-1: Assumptions Underlying Different Inquiries**

	<b>Positivist assumptions</b>	<b>Naturalistic assumptions</b>
The nature of reality	The nature of Reality is single, tangible, and fragmentable	Realities are multiple, constructed, and holistic. “[!]nquiry into these multiple realities will inevitably diverge (each inquiry raises more questions than it answers) so that prediction and control are unlikely outcomes although some level of understanding ... can be achieved.”

The relationship between the knower and the known	Knower and known are independent, a dualism.	Knower and known are interactive, inseparable. "The inquirer and the "object" of inquiry interact to influence one another; knower and known are inseparable."
The possibility of time and context free generalizations	Time and context-free generalizations (nomothetic statements) are possible. "[T]he aim of inquiry is to develop a nomothetic body of knowledge in the form of generalizations that are truth statements free from both time and context (they will hold anywhere and at any time)"	Only time- and context- bound working hypotheses (idiographic statements) are possible "... that describe the individual case."
The possibility of causal linkages	There are real causes, temporally precedent to or simultaneous with their effects	All entities are in a state of mutual simultaneous shaping so that it is impossible to distinguish cause from effects.
The role of values	Inquiry is value-free	Inquiry is value-bound in at least five ways...: <u>Corollary 1:</u> Inquiries are influenced by <i>inquirer</i> values as expressed in the choice of a problem... and in the framing, bounding, and focusing of that problem ... <u>Corollary 2:</u> Inquiry is influenced by the choice of the <i>paradigm</i> that guides the investigation into the problem. <u>Corollary 3:</u> Inquiry is influenced by the choice of the <i>substantive theory</i> utilized to guide the collection and analysis of data and in the interpretation of findings. <u>Corollary 4:</u> Inquiry is influenced by the values that inhere in the <i>context</i> . <u>Corollary 5:</u> With respect to corollaries 1 through 4 above, inquiry is either value-resonant (reinforcing or congruent) or value-dissonant (conflicting). Problem, ... paradigm, theory, <i>and</i> context must exhibit congruence (value-resonance) if the inquiry is to produce meaningful results."

(Lincoln and Guba, 1985, p. 37–38)

In looking at this juxtaposition, I propose that the naturalistic assumptions are better suited to my thinking as a researcher, and to our thinking as a research group. My rationale for this position is by the five aspects that are found in the far left column of Table 3-1; I consider each of these five areas from the perspective of our work in the field of faculty development.

*The nature of reality:* in direct contrast to the assumptions underlying positivist inquiry, and in alignment with those of naturalistic inquiry, our research team believes that there could be multiple realities, dependent on the time, context, and individuals involved (i.e., there are multiple realities, rather than a single, tangible, fragmentable one, and time and context free generalizations are problematic). The naturalistic focus on achieving a level of understanding, rather than prediction, is inherent in various research being undertaken by our research team. For example, in trying to understand how instructors make changes to their teaching, Workshop facilitators have evaluated the Workshop in a variety of ways: through participant questionnaires, interviews, pre/post-Workshop course outlines, successive concept mapping drafts, follow up group discussions, and classroom research studies (Amundsen, Weston, & McAlpine, 2005).

*The relationship between the knower and the known:* We think that the knower and the known are interdependent and interactive (rather than dualistic). These ideas are visible in the work our research group does as faculty developers and researchers.

An example from the Workshop that highlights both these ideas (multiple, contextual realities, and interdependence between the knower and the known) is that Workshop participants are encouraged to spend a substantial chunk of time within the Workshop clarifying their individual understanding of their course content, representing it coherently to their peers, and using this understanding as the touchstone for all subsequent course design decisions. In addition, the Workshop and follow up groups focus on developing a shared discourse on

pedagogical issues, and a language to express individual conceptions about teaching and learning to others. There is a clear sense in both these instances, that two individual instructors could teach the same course in exemplary, though dissimilar manners, depending on their individual understanding of a) the relationships and hierarchies of concepts within a course, b) the learning that each values within the course, c) the strategies they think best support this learning, and d) the contexts within which they work. That is, different professors may think about the same course in differently nuanced ways, though the big ideas within it will remain the same. Connecting this nuanced understanding of the course content with a professor's instructional decision making, while lending coherence and clarity to the professor's teaching, also encourages a view of teaching that is highly contextualized and individualized. This example also highlights our research groups positioning with regard to the next area: time and context free generalizations are problematic.

*Time and Context free generalizations:* Congruent with the idea of possible multiple realities, and the problematic nature of time and context free generalizations, the research carried out by our research team has continuously emphasized careful consideration of context and value alignment when applying research (ours and others) to new contexts. Our ongoing attempt in our research is to provide trustworthy research and rich descriptions of our research context. An example of this thinking referred to in Chapter One of this thesis is that facilitators distance themselves from the idea of a generic, one size fits all, form of teaching and learning, and support instead the idea of disciplinary differences.

They encourage a value free discussion on teaching methodologies as appropriate to instructors' intent with regard to student learning.

*The role of values:* We certainly believe that inquiry is value ridden, and an inquirer's assumptions spill into the work (s)he does, as do the assumptions of the paradigm we choose to work within. As such, we highlight the importance of making such assumptions explicit early on for the sake of clarity (for example, you will note that the underlying assumptions of the Workshop have been laid out in Chapter One of this thesis). I would also like to direct your attention to the literature review our research group is working on (Amundsen, Abrami, McAlpine, Weston, Krbavac, Mundy, & Wilson, 2005), which is referred to in Chapter Two. In keeping with the thinking that inquiry (and practice) is value ridden, our review has carefully noted faculty developers' stated assumptions about what constitutes effective faculty development, and teaching and learning in higher education while considering the work they do as developers.

*The possibility of causal linkages:* The last aspect, the possibility of causal linkages, is not as clear cut for us. I suggest that the context we work within compels us to acknowledge the naturalist assumption that "entities are in a state of mutual shaping so that it is impossible to distinguish cause from effect" (Lincoln & Guba, 1985, p. 38). Pickering (2006) and others pose the same argument:

If it is accepted that professional learning is "situated" (Lave, 1993) and that universities are culturally complex organizations (Sackman, 1997) with a variety of departmental and institutional teaching cultures (Knight & Trowler, 2000) then any attempt to understand the effect of a development program must situate this

type of learning in relation to a complex array of influences for change. Encounters with colleagues, students and university systems and day-to-day stresses and pressures will all have a role to play. Driving metaphorical “wedges” (Rowland, 2001) between elements of the lecturer’s world by focusing on specific influences for change (for example, a development intervention) does not reflect a context in which experiences are inter-dependent, and in which teaching development interventions are only part of the “puzzle” of being a university lecturer ... Such vocabulary [of inputs and outcomes in staff development] makes one wonder about the degree to which ...variable contexts, the unpredictability of change, or (if the importance of these are accepted) the inevitable fuzziness of the relationship between input and outcome [will be taken into account]. (Pickering, 2006, p. 321)

I suggest that Pickering makes a compelling case here for why the naturalistic assumption of mutual, simultaneous shaping cause and effect, one indistinguishable from the other, is valid within the context of faculty development.

I believe that it is clear that our work as a research group is more in accord with the naturalistic paradigm, than with a conventional one. My thesis study, while not a naturalistic inquiry itself, constitutes a document analysis that uses documents obtained through a naturalistic process. For this reason, I discuss, in the following section, procedures I have followed in my study to establish trustworthiness.

#### **3.1.1.1 Trustworthiness**

In dealing with the issue of trustworthiness, researchers have, according to Lincoln and Guba (1985), historically found it useful to pose the following questions to themselves:

“Truth value”: How can one establish confidence in the “truth” of the findings of a particular inquiry for the subjects (respondents) with which, and the context in which, the inquiry was carried out?

Applicability: how can one determine the extent to which the findings of a particular inquiry have applicability in other contexts or with other subjects (respondents)?

Consistency: How can one determine whether the findings of an inquiry would be repeated if the inquiry were replicated with the same (or similar) subjects (respondents) in the same (or similar) context?

Neutrality: How can one establish the degree to which the findings of an inquiry are determined by the subjects (respondents) and conditions of the inquiry and not by the biases, motivations, interests, or perspectives of the inquirer? (Lincoln and Guba, 1985, p. 290)

Lincoln and Guba (1985) have proposed the following criteria to address these questions: the criteria of credibility, transferability, dependability, and confirmability (see Table 3-2). Each of these criteria is discussed in greater detail below - an argument for each criterion is outlined, followed by a discussion of how this thesis research addresses it.

**Table 3-2: Naturalistic Criteria for Establishing Trustworthiness**

<b>Trustworthiness (the questions researchers ask)</b>	<b>Naturalistic Criteria</b>
Truth Value	Credibility
Applicability	Transferability
Consistency	Dependability
Neutrality	Confirmability



**“Truth value” (or the idea of credibility within naturalist inquiry)**

If one accepts that multiple constructed realities exist, an ultimate justifying benchmark for such realities becomes unavailable, as, according to naturalistic inquiry, constructions such as these exist in the human mind and are accessible to the individuals who construct them. To demonstrate “truth value” a researcher must show that these constructions have been satisfactorily represented, and his/her representation is “credible to the constructors of the original multiple realities” (Lincoln & Guba, 1985, p. 296). As such, a researcher must carry out his or her research in ways that enhance and support “the probability of credible findings” (Lincoln & Guba, 1985, p. 296). This can be demonstrated by having the participants of a study, the constructors of the multiple realities, approve these findings.

Lincoln and Guba (1985) propose various ways to increase the credibility of a research project. Relevant to this thesis are those of prolonged engagement, triangulation, and member checking:

**Prolonged engagement:**

*Prolonged engagement* with a culture allows a researcher time to understand and learn a culture, test for misinformation and distortions, and move away from being “a stranger in a strange land” (Lincoln & Guba, 1985, p. 302). It also provides for time to build trust between the investigator and the participants being researched (Lincoln & Guba, 1985).

The issues of familiarity with context and trust are more applicable and important in this thesis research, than those of respondent related distortion to

data, as the data was collected previous to my starting this research. I am able to demonstrate prolonged to medium engagement in the context of this research in the following ways:

*Analysis 1:* This Analysis examines the integrity of the Workshop with regard to key Workshop concepts, that is, were the Workshop's espoused concepts (analysis of course content, learning outcomes, instructional strategies, assessment methods, and alignment between these elements) taught within the Workshop, and were they a part of Workshop participants' learning experience? I have worked as a research assistant with our research team since April 2003. During this time, I have participated in a variety of research tasks specific to faculty development and faculty development research, such as assisting with the Workshop, co-presenting at conferences with other members of the research team, and working on a literature review of faculty development with some members of the research team.

Working with the members of our research team over a period of time encouraged a level of trust and comfort between other members and me, which, in turn, supported my work in Analysis 1.

*Analysis 2:* This analysis looked for evidence of changes in a comparative analysis of the participants' pre- and post-Workshop course outlines. My work assisting with the Workshop encouraged a mid-level of engagement with the Workshop participants who provided the data for Analysis 2. In addition, I have supported faculty and instructors in the design of their distance courses as part of the work as a Program Director in the Centre for Online and Distance Education

at the same University where some of the Workshop participants have positions. This has further heightened my understanding of the context within which at least some Workshop participants (i.e. professors) work.

### **Triangulation**

Triangulation is another way to improve the probability of credible findings in an inquiry. Denzin (1978, as cited in Lincoln & Guba, 1985) discusses four different modes of triangulation, “the use of multiple and different *sources, methods, investigators, and theories...* [multiple sources could imply] *multiple* copies of one *type* of source (such as interview respondents) or *different* sources of the *same* information (for example, verifying an interview respondent’s recollection about what happened at a board meeting by consulting the official minutes of that meeting)” (p. 305). This thesis study makes use of both *different* sources (Analysis 1) and *multiple* sources (Analysis 2) as follows:

Analysis 1: This analysis used three data sources: the Workshop binder, the facilitators’ notes, and the facilitators’ PowerPoint slides. These sources and what they included are discussed later in this chapter under the heading “Procedures for This Research/Data Sources”

Analysis 2: The second analysis used one data source—pre and post Workshop course outlines of Workshop participants. However, as suggested by Denzin (1978, as cited in Lincoln & Guba, 1985), multiple copies of one type of source arguably establish triangulation, if considered separately. This analysis, and its results, considers the appearance of codes in each course outline.

### **Member checking**

The checking of data, analytic categories, interpretations, and conclusions with the respondents from whom the data was initially collected is highlighted as “the most crucial technique for establishing credibility” (Lincoln & Guba, 1985, p. 314). If an investigator is to claim that his/her interpretations are recognizable as adequate representations of respondents’ own realities, the respondents must be given an opportunity to respond to these interpretations. This thesis used member checking for both Analysis 1 and 2, as described below.

Analysis 1: A member check was carried out with various members of the research team over a 2- to 3-month period, and their inputs were taken into account in the writing up of this analysis (this is described in the Analysis 1 procedures, later in this chapter). The respondents for Analysis 1 were senior members of the research team. The coding scheme, results, and interpretations were each discussed with them in turn; the coding scheme was clarified (the parent codes for certain sub-codes were changed) to better match their thinking.

Analysis 2: A two-hour session was arranged with one participant to obtain his view on the value of the analysis. I summarized my rationale, codes, coding procedures, and results for the participant during this meeting. I discuss the participant’s observations in Chapter 5: Discussion. They relate specifically to one code: instructional strategies, within Analysis 2.

In summary, this research has demonstrated prolonged engagement and triangulation, and carried out member checks, to enhance the probability of credible findings.

**Applicability (or the idea of transferability within naturalistic inquiry)**

The question of applicability focuses on the idea of *transferability*, and one cannot infer transferability by simply knowing “the sending context”. To ensure transferability of research within a context, it is essential to understand both the sending and receiving contexts. As such, accumulating sufficient evidence of contextual similarity becomes paramount, and the burden of proof of contextual similarity rests with the researcher seeking to apply research results in a new context, rather than with the original investigator who cannot know where transfer might be sought (Lincoln & Guba, 1985). However, the original investigator is responsible for providing sufficient descriptive data, or a “thick description” of the original research context, to enable others to make meaningful judgments of possible transfer (Lincoln and Guba, 1985).

Naturalistic researchers are unclear about exactly which elements should make up a “proper” thick description. However, certain minimum elements that should be included in such a description have been indicated. A thick description should include:

- an explanation of the problem that is being studied
- a careful description of the context within which the inquiry took place, and with which it is concerned. This is one of two especially important items in providing “thick descriptions”
- a comprehensive description of the interactions and processes within the context, as relevant to the problem. This is the second item especially important when providing a thick description.
- a discussion of elements identified as important that are being studied in depth

- a discussion of outcomes or “lessons learnt” from the inquiry. These lessons should be considered “working hypothesis” that help understand a site, rather than generalizations. (Lincoln and Guba, 1985)

Most of these elements have been included in this thesis. Chapter 1 outlines in some detail the broader issues within this area of faculty development practice (p. 1) and the value of the present research in this context. It also details the specific context of this research and the background of this context (p. 7), both elements identified as especially important to include in a thick description. The methodology for both analyses undertaken in this thesis, have been clearly and carefully laid out, as has an argument for the trustworthiness of the study. A discussion of the outcomes and “lessons learnt” will follow in later chapters.

**Consistency (or the idea of dependability in naturalistic research)**

Naturalists see reliability as associated with observed changes, and propose the criterion of dependability as a substitute for reliability. To demonstrate dependability, the naturalist attempts to take into account both, “factors of instability *and* factors of phenomenal or design induced change” (Lincoln & Guba, 1985, p. 299).

Lincoln and Guba propose an “inquiry audit,” using the idea of a fiscal audit as a metaphor, to establish both the dependability and the confirmability of an inquiry. A fiscal auditor is expected to examine the *process* as well as the *product* of an inquiry. Similarly, for an inquiry audit:

“... the auditor attests to the *dependability* of the inquiry. The inquiry auditor also examines the *product*—the data, findings, interpretations, and recommendations—and attests that it is supported by data and is internally coherent so that the “bottom

line” may be accepted. This latter process establishes the *confirmability* of the inquiry. Thus a single audit, properly managed, can be used to determine dependability and confirmability simultaneously.” (p. 318)

An audit trail is thought to be especially important to an inquiry audit.

Halpern (1983, as cited in Lincoln and Guba, 1985), suggests that six types of data be included in such trail:

- a. Raw data
- b. Data reduction and analysis products; unitized information, quantitative summaries, working hypothesis, hunches, concepts, etc.
- c. Data reconstruction and synthesis products; the structure of categories (concepts, definitions, relationships), and a final discussion showing “connections to the existing literature and an integration of concepts, relationships, and interpretations.”
- d. Process notes: that is, methodological notes of procedures, designs, strategies, and rationale; trustworthiness notes discussing credibility, dependability, and confirmability techniques, as applied to the study; and audit trail notes.
- e. Materials relating to intentions and dispositions: the inquiry proposal, personal notes on reflection and motivations, and expectations.
- f. Information on instrument development. (p. 319–20)

For this thesis a formal audit was not undertaken because of limited resources. However, five of the six data types suggested for an audit trail (a - e, above) were maintained for both analyses. The sixth item, item ‘f: information on instrument development’ does not apply to this research.

In addition, an ongoing self-audit was undertaken for both analysis. For Analysis 1 this included keeping a close record of my thinking and rationales for emergent and a priori coding in the form of dated memos in Atlas ti (the coding software) which indicate shifts in my thinking through the coding process (available upon request). When the coding for this analysis seemed to stabilize, that is, there were no further emergent codes or the need to repeatedly fine-tune coding rules, I re-coded all Analysis 1 data from the start to check my coding rules for consistency. The discrepancies from this process were scrutinized and resolved. This two-step process was repeated till the coding rules were firm and provided a clear and consistent coding guide.

The self-audit for Analysis 2 was similar, though more extensive. Repeat code-checks were carried out on the data, as outlined above, till the coding rules were firm, and provided clear and consistent guidelines for coding. Circumstances for exceptions to the coding rules were also noted. The relationship between codes in this analysis is sometimes complex, as can be expected from a course design artefact<sup>13</sup>. As such, the relationships between codes showing a tendency to overlap were made explicit, boundaries and exceptions between such codes were noted, and clear examples were provided for each code to help with coding decision-making. In some instances short coding decision trees were created, to encourage dependability and confirmability. The three main resources available to review this audit process

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<sup>13</sup> For example, naming conventions often overlap with different organizing categories. One example is feedback, which could be considered as (formative) assessment, or an instructional strategy.



are (i) a Codebook (Appendix C: Analysis 2 Codebook), (ii) memos and coding definitions within Atlas ti (the coding software) (available upon request), and (iii) Analysis 2 coding examples (available upon request).

The Codebook details coding rules and their exceptions, rationales for the coding and coding representations, and some basic examples of the codes. The purpose of developing the Codebook was to create a framework within which the Workshop participants' course outlines could be examined. The dated memos and definitions within Atlas ti offer more extensive details of the coding rules, short coding trees to support decision making, and the progression of my thinking with regard to the rules. The Analysis 2 coding examples provide extended examples for each code, to further support an understanding of the coding scheme, and clarify coding decision-making.

### **3.2 Procedures for This Research**

The primary focus of this research was to compare the Workshop participants' pre- and post-Workshop course outlines in relationship to key Workshop concepts.

As I embarked on the analysis of course outlines, I realized that I must confirm that the concepts I sought evidence of in the course outlines were well grounded in the participants' Workshop experience. In other words, were the Workshop's espoused key concepts (analysis of course content, learning outcomes, instructional strategies, assessment methods, and alignment between these elements) aligned with what was actually taught within the Workshop? It

was important to confirm the evidence of a link between these Workshop concepts and the Workshop experience, before examining pre and post-Workshop course outlines. Therefore, two analyses were conducted to address the following two research questions:

1. Do the Workshop instructional artefacts such as the course-pack (provided to Workshop participants), the instructor notes (provided to Workshop co-instructors), and facilitators' daily PowerPoint slides, show evidence of key Workshop concepts such as explicit and well-defined analysis of course content, learning outcomes, instructional strategies, assessment methods, and alignment between these elements?
2. What evidence is there of change, as related to key Workshop concepts, in participants' pre- and post-Workshop course outlines?

For both analyses, I used a qualitative analysis software called Atlas ti. This software allows a researcher to load multiple documents into one hermeneutic unit, and code them. The software is flexible and provides a variety of tools. Code definitions, memos<sup>14</sup>, network maps can be created and linked if required within the software. Atlas ti also allows sorting of data in various ways; for example, if I wanted to see data that had been dual-coded with two specific codes, the software provided the flexibility to do this.

Procedures followed for the two analyses are outlined below.

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<sup>14</sup> I used dated memos extensively, to track my thinking about various codes, and at a more abstract level, to consider appropriate codes within my research context.

### **3.2.1 Analysis 1**

#### **3.2.1.1 Data Sources**

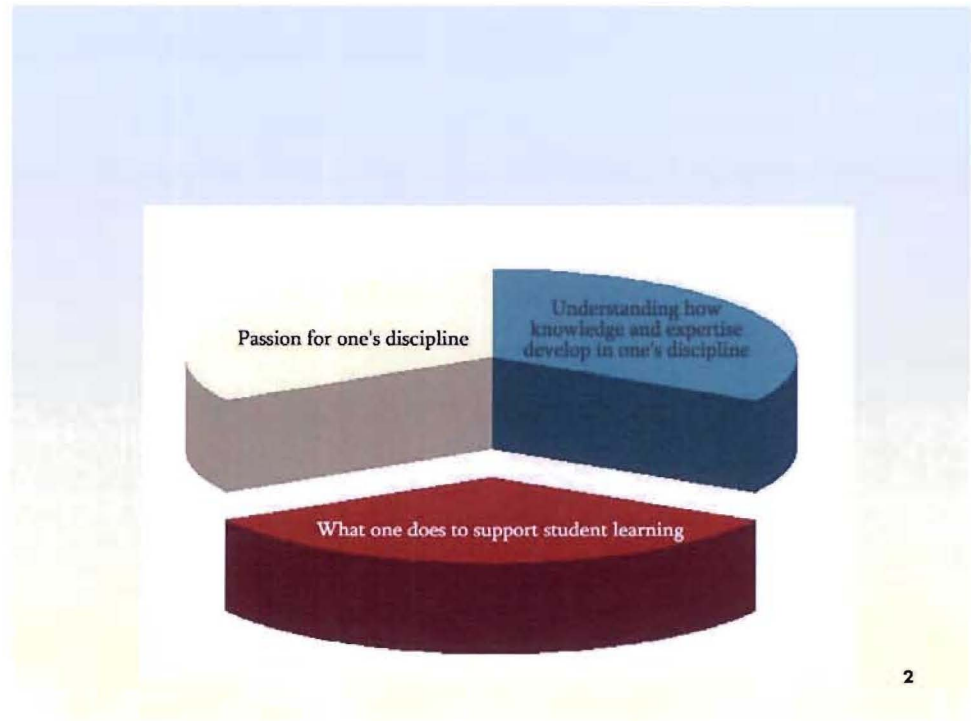
1. The Workshop course pack: This is a 3-ring binder that is distributed to all participants before the Workshop begins. It contains all the course materials that participants use during the Workshop, such as an introduction to the Workshop, daily schedules, a section each on four of the five key Workshop concepts, and all the core and suggested readings for the Workshop. The core and suggested readings have not been used as data sources for this research for two reasons. It was felt that they were not as stable a source, for our purpose, as other items: they were changed periodically between 2003 and 2005. In addition, we cannot say with any certainty that the literature was read by every Workshop participant, and as such was a part of every participant's experience.
2. Instructor notes: These are included in all facilitators and co-facilitators course-packs. They contain instructional sequences, and related suggestions for instructors on each day's organization, and the teaching of key concepts, during the Workshop.
3. Facilitators' daily PowerPoint slides: These are used for Workshop large-group presentations at the beginning of each day. They introduce the topic for the day, and discuss some key aspects of these topics.

### 3.2.1.2 Data Types and Units of Analysis

The instructional artefacts discussed above comprised the data for Analysis 1. These artefacts provided varied data types, and as such, different units of analysis were established for coding. These are explained in the Table below:

**Table 3-3: Data Types and Units of Analysis**

<u>Data types</u>	<u>Units of Analysis &amp; Examples</u>
<u>Handouts:</u>	<p>The whole handout. This data type refers to the handouts provided to participants to help them with the course design process</p> <p><i>Example:</i> a piece of text listing different types of assessment methods, and the kinds of learning they can assess, would be categorized as a handout.</p>
<u>Activities:</u>	<p>The whole activity. Activities are different from handouts in that these are a sequenced instructional strategy designed to help participants practice something. Activities can refer participants to the use of handouts.</p> <p><i>Example:</i></p> <p>Suggested ways to critique a concept map:</p> <p><u>When you have a draft</u></p> <p>A. Find someone to listen while you describe the map out loud; ask them to see if you mention ideas of relationships that are not included in the map.</p> <p>B. Ask these questions of the map, either your own or someone else's...</p> <ol style="list-style-type: none"><li>1. What is the specific relationship between / among each of the concepts?</li><li>2. Have any relationships been overlooked</li><li>3. ... etc.).</li></ol>
<u>Example:</u>	<p>The whole example. This data type refers to examples of the key concepts (learning outcomes, assessment plans, etc.), created by previous participants, which are provided to participants for their reference.</p>
<u>Articles:</u>	<p>Verbatim themes within an article (for example, an article might discuss themes of cognitive development, or student engagement, and ways of facilitating this engagement). This data type refers only to short articles embedded within the course pack, which were read by participants during their Workshop day. Longer core and suggested readings were not included as a data source for this analysis, as earlier mentioned.</p>
<u>Graphics:</u>	<p>The whole graphic which was part of a handout or a PowerPoint slide. <i>Example:</i></p>



Statements: A complete thought. *Example:*

Allow participants some time to review their notes from the Intensive Writing Exercise done in the large group.

### 3.2.1.3 Coding Procedures for the Workshop Instructional Artefacts

1. The Workshop course pack, instructor notes and PowerPoint slides were scanned into the computer and converted to rich text format files using the OmniPage Pro X scanning technology and software. These rich text files were then imported into Atlas ti 5.
2. The instructional artefacts were coded within a framework of key Workshop concepts (“analysis of course content,” “learning outcomes,” “instructional strategies,” “assessment methods,” and the concept of “alignment” between each of these elements). These concepts were chosen in discussion with the Workshop facilitators, as the valued and central concepts of the

Workshop. These are also the concepts that appear on the Workshop concept map (see Introduction, Figure 1-1: Concept Map of the Workshop, p.13).

To define how these concepts were taught in the Workshop, emergent sub-codes were accepted under each a priori main code.

3. Simultaneously, an open mind was kept for emergent main codes in addition to the a priori main codes, which might appear in the instructional artefacts, in the spirit of inductive coding.
4. To ensure firm code categories, I did repeated code-checks during the coding process, starting each time from the first coded document, till the codes stabilized (that is, till such time that the codes and units of analysis stayed firm during my coding check). The code categories were discussed with two members of the research team (as part of the member checking process), and further refinements were made to the codes to improve the clarity of the coding schemes. When required, sub-codes were further sub-coded. The naming convention I've followed is explicit: Main code/sub code/description, to allow for easy recognition of sub-codes. Hence, "IS–modelling (being explicit)" refers to a main code "IS" (instructional strategies), a sub-code "modelling" (the modelling of instructional strategies by Workshop facilitators), and the instructional strategy modelled is "being explicit."
5. To better understand the relationships and hierarchies between the codes, network maps were created within Atlas ti for all the codes. The

relationships between codes were labelled with a word or phrase that best explained to me, the occurrence of these codes in the data. This exercise helped me clarify that codes were actually positioned appropriately and logically in relationship to other codes and helped me better develop my conceptual thinking related to these concepts.

The naming convention for the network maps is as follows: code names are followed by two numbers in brackets: (0, 0). The first number indicates "*groundedness*", that is, how often this code occurred in the data. The second number indicates *density*, that is, how many other codes is this code related to<sup>15</sup>. In this chapter my use of the term "well-grounded" for a code, refers to the number of coding instances, and the term "well-defined" or "dense" refers to the number of relationships between that code and other codes. In discussing both numbers together, I follow the same naming convention (0, 0).

My thinking, the rules related to the coding process, categorization, etc. are tracked with the Atlas ti software memos, for each code.

Hardcopies of these can be made available upon request.

## **3.2.2 Analysis 2**

### **3.2.2.1 Data Sources**

Twenty-six sets of course outlines (pre and post Workshop) collected during the years 2003 to 2005, and representing courses in different disciplines, were

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<sup>15</sup> As mentioned earlier in this section, I created network maps of all analyzed codes, and labelled the relationships between codes as I understood them. The density refers to the total number of such relationships a code has.

analyzed for this research. The course outlines represented courses in Agricultural and Environmental Economics, Earth Sciences, History, Musculoskeletal Disorders, Biology, Education, Kinesiology, Music, Business, Engineering, Languages, Physics, Chemistry, English, Mechanics, Social Work, Computing Science, and Hispanic Studies.

The post-Workshop course outlines were collected immediately at the end of the Workshop. This has its limitations in that these may reflect Workshop participants' best effort at course design at the end of an intensive course design workshop. They might not take into account the various contextual factors effecting their course, till later when the course is to actually run.

### **3.2.2.2 Document analysis**

Course outlines were scanned, and converted to a rich text format (RTF) document using the software OmniPage Pro. These RTF documents were all assigned to a Hermeneutic Unit within the software Atlas ti version 5. A Codebook (Appendix C: Analysis 2 Codebook) was developed to provide a framework within which the Workshop participants' course outlines could be examined. The Codebook makes the link between Analysis 1 and 2<sup>16</sup>, outlines how the codes for Analysis 2 are set out, provides a rationale for various coding and coding representations, and discusses coding rules and exceptions, while providing examples. Each of these aspects is briefly discussed in the following sections.

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<sup>16</sup> Analysis 1 examined the integrity of the workshop experience, and the purpose of Analysis 2 was to examine changes in Workshop participants' pre and post-Workshop course outlines, related to key Workshop concepts confirmed by Analysis 1.



### **3.2.2.3 Connecting Analysis 1 and Analysis 2, and going beyond**

As mentioned previously, the coding for Analysis 2 was based on the Workshop concepts, as confirmed by Analysis 1. Analysis 1 codes were used as a priori codes for Analysis 2. Certain Analysis 1 codes were excluded, either at the beginning of the analysis, or during the coding process (a discussion of this is provided in Chapter 4: Results, p. 99, as well as in Appendix C: Analysis 2 Codebook, p. 143. In a few instances, emergent sub-codes were accepted in Analysis 2, which can also be seen in Appendix C: Analysis 2 Codebook. A discussion of the reasons for their inclusion can also be found in the Codebook within their respective coding discussions.

### **3.2.2.4 Overview of Analysis 2 Codes and Organization of this Section in the Codebook**

The overview of the main codes used in Analysis 2 is as follows:

- General Information
- Course Materials
- Coding the Course Content
- Coding the Learning Outcomes
- Coding the Course Outline as a whole
- Instructional Strategies
- Assignments and Assessment

During the coding process, I repeatedly re-coded sections of the data, to finalize the coding rules, and specify exceptions to these rules in Analysis 1. This

process is closely related to Glazer and Strauss's (1967, as cited in Lincoln & Guba, 1985) 'constant comparative method'. After completing the coding, I re-coded the data using the final version coding rules to confirm clarity of boundaries, and to be sure that each included data unit was admissible under the final coding rule for its category. For codes that were complicated to code, short decision trees were created within Atlas ti, to increase dependability and confirmability. A peer debrief for this analysis was planned, but due to scheduling constraints, could not be carried out.

The following chapter outlines the reports that were generated from both Analysis 1 and 2, and the result of the each analysis.

## **4: RESULTS**

### **4.1 Introduction**

This chapter outlines results of Analysis 1 and Analysis 2. The results for

Analysis 1 respond to the question:

1. Do the Workshop instructional artefacts such as the course-pack (provided to Workshop participants), the instructor notes (provided to Workshop co-instructors), and facilitators' daily PowerPoint slides, show evidence of key Workshop concepts such as explicit and well-defined analysis of course content, learning outcomes, instructional strategies, assessment methods, and alignment between these elements?

The results for Analysis 2 respond to the question:

2. What evidence is there of change, as related to key Workshop concepts, between participants' pre- and post-Workshop course outlines.

As mentioned previously, the results from Analysis 1 provide the foundation for Analysis 2. This is discussed later in this chapter (p. 99), subsequent to a description of Analysis 1 results.

## 4.2 Analysis 1

### 4.2.1 Codes and Sub-codes

The results for Analysis 1 are represented using network maps, one of the tools available in Atlas.ti. The main codes are the centre of each network map. The maps also show associated sub-codes, the number of coding instances (or grounding), and the relationship between the sub-code and the main code.

The naming convention for the network maps is as follows: code names are followed by two numbers in brackets: (0, 0). The first number indicates “groundedness”, that is, how often this code occurred in the data. The second number indicates *density*, that is, how many other codes is this code related to<sup>17</sup>. In this chapter my use of the term “well-grounded” for a code, refers to the number of coding instances (I’ve taken 10 or more coding instances to suggest that the code in question was well grounded; this number is arbitrary, though most often the term well-grounded in this chapter is referring to coding instances of 20, 30, or 100), and the term “well-defined” or “dense” refers to the number of relationships between that code and other codes. In discussing both numbers together, I follow the same naming convention (0, 0).

At times I refer to *total* “coding instances”, as opposed to simply “coding instances”; in these cases I’m referring to the sum of coding instances for the main code and *all* its sub-codes. At times, when discussing the network maps, I speak of codes having *depth*. This refers to the number of levels of sub-codes

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<sup>17</sup> As mentioned in Chapter 3 (p. 28) I created network maps of all analyzed codes, and labelled the relationships between codes. The density refers to the total number of such relationships a code has.

under a main code. I suggest, for example, that a code with 3 levels of sub-codes under it was explored in greater depth during the Workshop, than a code showing 2 levels of sub-codes.

There are five *a priori main* codes for Analysis 1, as discussed earlier: analysis of course content (CC), learning outcomes (LO), instructional strategies (IS), assessment methods (Assess), and the alignment (AI) between each of these concepts. Each of these *a priori codes* has *emergent sub-codes*. For a summary of these see Table 4-1: A Priori Main Codes and their Emergent Sub-codes. In addition, there are two *emergent\_main* codes: course outline elements (CO) and context. The emergent code “course outline” (CO) has further *emergent sub-codes*, which are summarized in Table 4-2: Emergent Main codes and their Emergent Sub-codes. The details of all these codes can be seen in the network maps provided after the discussion of each *main* code.

**Table 4-1: A Priori Main Codes and their Emergent Sub-codes**

<b>Analysis of course content (CC)</b>	Modelling; course concepts; relationships between concepts and concept mapping.
<b>Learning outcomes (LO)</b>	Modelling; domains and levels of learning; assessable; comprehensive; concise; learner centred; understandable.
<b>Instructional strategies (IS)</b>	Modelling; learning oriented; informing; practice; balance; types; in and out-of-class learning; feedback; student engagement; decision-making criteria; presentation.
<b>Assessment methods (Assess)</b>	Modelling; techniques; formative; summative; informal; formal; alternative; traditional; provide feedback; explicit criteria; options to students; balance; distribution; doable; varied methods; weighting; complete; purpose; key issues.
<b>Alignment</b>	CC-LO; CC-IS; Learning-IS; Learning-Assess; IS-Assess; Contexts/Students-LO; Contexts/Students-IS.

**Table 4-2: Emergent Main codes and their Emergent Sub-codes**

<b>Course outline elements</b>	General information; course content; learning outcomes; instructional methods; assignments and evaluations; course material.
<b>Context</b>	(no sub-codes)

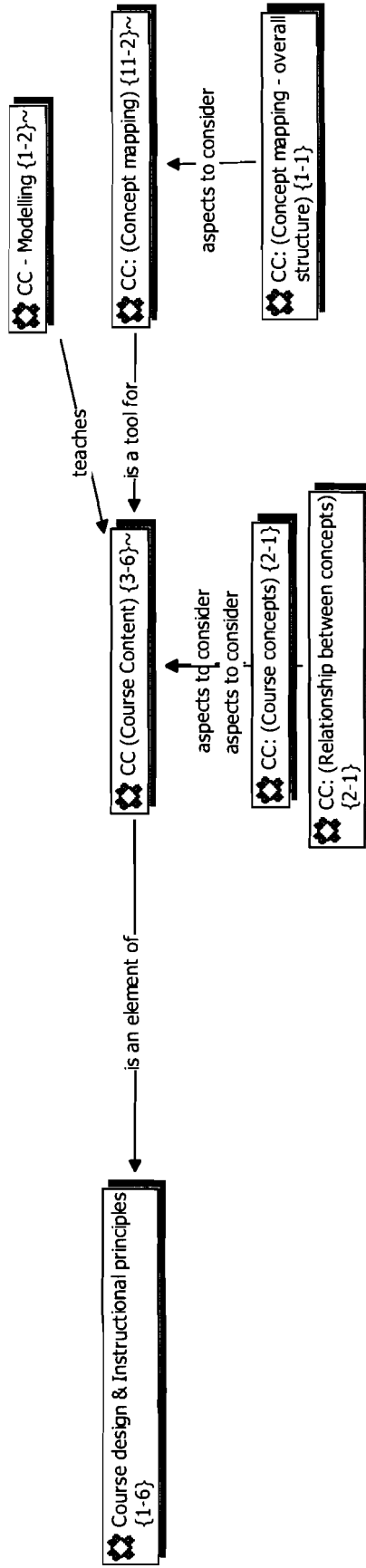
#### **4.2.1.1 A Priori Codes and Their Related, Emergent Sub-codes: A Selective Narrative**

What follows is a *selective* narrative of Analysis 1, that is, though the network maps available in this chapter show all the codes, and different levels of sub-codes, my discussion of these maps touches on only those aspects of the maps that are either of particular interest, or that need further explanation due to their complexity. One code that might be confusing, and requires further explanation, is 'modelling'; it is a sub-code under each main code, for example, 'Analysis of Course Content – modelling', 'Learning Outcomes – modelling', and

so on. This code refers to facilitators modelling of each of these course design elements. As this is a document analysis, modelling is, of course, restricted to the artefacts used in Analysis 1.

**A priori Main Code: Analysis of Course Content (CC):** The analysis of course content appeared extensively (Figure 4-1: Course Content and its Sub- and Super-codes, total coding instances: 20) in the Workshop artefacts that were examined for Analysis 1. The emergent sub-code “concept map” under the analysis of course content was well grounded (total coding instances: 12), which suggests that concept mapping, as related to the analysis of course content, was dealt with at length during the Workshop. Quotations within this sub-code related to facilitator suggestions for creating, revising and critiquing concept maps, and examples of concept maps. Facilitators’ modelling of the analysis of course content seems to be minimally grounded (coding instance: 1), however the representation of this code is problematic in that everything within the Workshop artefacts could potentially be coded under this code. Though I took a decision not to do so, this is important to note here. The one instance of coding that shows up here represents a section in the Workshop binder when the facilitators were introduced the Workshop content. .

Figure 4-1: Course Content and its Sub- and Super-codes



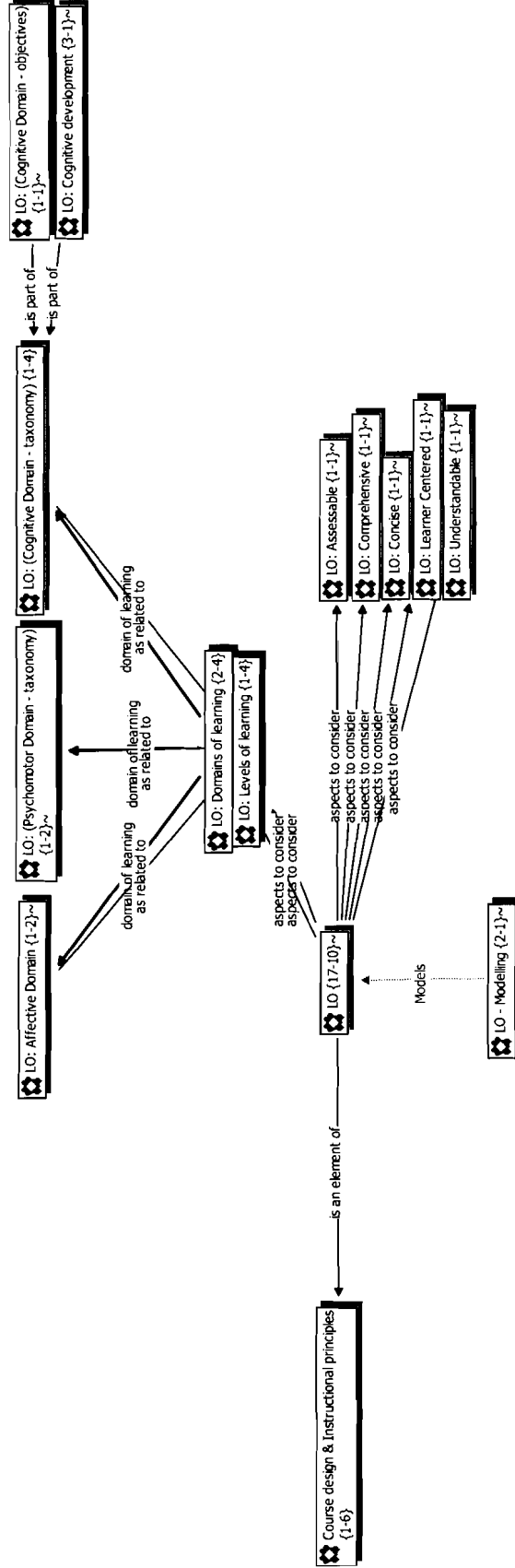


**A priori Main Code: Learning Outcomes (LO):** As can be seen from the map (Figure 4-2: Learning Outcomes and its Sub- and Super-codes), this code was very well grounded (total coding instances: 32), and quite dense (relationships: 10). This main code pointed to instances within the Workshop when participants were given examples, suggestions and opportunities to create, revise, practice, receive feedback, and critique learning outcomes.

The emergent sub-code “domains of learning” shows more density (relationships: 4) than most other sub-codes under learning outcomes. The different domains of learning dealt with in the Workshop included: psychomotor (coding instance: 1, relationships: 2), affective (coding instance: 1, relationships: 2) and cognitive (total coding instances: 5, relationships: 4). The cognitive domain is better grounded and more dense than the other two, suggesting that this was dealt with in greater detail. However, it’s important to remember that these results are based on one aspect of the facilitators’ practice—the Workshop binder and PowerPoint slides and does not include, for example, notes on the actual discussions and interactions during the Workshop.

The Workshop facilitators modelled their use of learning outcomes during the Workshop, to some extent (2, 1). Though the facilitators have eleven learning outcomes for the Workshop, these were coded together as one unit of *modelling* learning outcomes (Table 4-1: A Priori Main Codes and their Emergent Sub-codes). The total instances coded for *modelling* of learning outcomes in the Workshop artefacts was 2.

**Figure 4-2: Learning Outcomes and its Sub- and Super-codes**



**A priori Main Code: Instructional Strategies (IS):** The instructional strategies code was the most complex of the five a priori codes (total coding instances: 146). As can be seen in Figure 4-3, it generated various sub-codes (density: 12). This main code related to multiple levels of definition, instances of the practice, and suggestions for creating and making decisions about instructional strategies.

The sub-codes "IS: practice" stood out in its density of relationships (8), which suggests that a variety of concepts were discussed within and around it. This sub-code refers to the instructional strategy of 'practice', that is, providing the students with an opportunity to practice the kinds of understanding that are valued within a course, and are likely to be assessed. This concept seems to have been dealt with in some depth, as one sub-code was further sub-coded (IS: practice –structure); IS: practice-structure refers to providing a structure within which students are encouraged to practice certain types of thinking or skills. It's interesting to note too, that though the sub-code "IS: feedback" (providing feedback to students) is not extensively grounded or dense, it is modelled extensively by the facilitators (see sub-code "IS-modelling (feedback)"). "IS: Student engagement" (that is, planning consciously for student engagement within the course design) is also interesting to look at for depth. It has some groundedness (total coding instances: 6) and density (4). In addition, this sub-code goes down three levels, which again suggests this concept was more fully dealt with.

Many of the sub-codes for instructional strategies overlap, and hence are somewhat difficult to discuss (for example, the sub-codes "IS: Practice," "IS:

Informing,” “IS: Balance,” “IS: Learning oriented,” and “IS: Feedback,” all overlap to lesser or greater degrees). This also suggests the complexity of the main code, in that its concepts are very intertwined, and need to be discussed in relation to each other.

“IS – Modelling” is a particularly interesting sub-code. It is well grounded, (total coding instances: 104, density: 9), and refers to facilitators’ modelling of various instructional strategies within the Workshop. Of special note is “IS-Modelling” (being explicit) (coding instances: 32, density: 4). Quotations within this pointed to Workshop facilitators being explicit about their planning, rationale, and Workshop design. These sub-codes align with the facilitators’ theoretical discussion of “transparent teaching” (Hunkins, 1987, as cited in Amundsen, Winer, & Gandell, 2004).

The use of feedback as an instructional strategy (IS-Modelling (Feedback)) was also modelled extensively (total coding instances: 26), usually in the form of group and self-feedback, often used in conjunction with microteaching<sup>18</sup>. In addition, facilitators spent some time informing participants about, and scaffolding their use of, feedback as evidenced by the presence of the sub-code “IS-modelling” (feedback: giving and receiving).

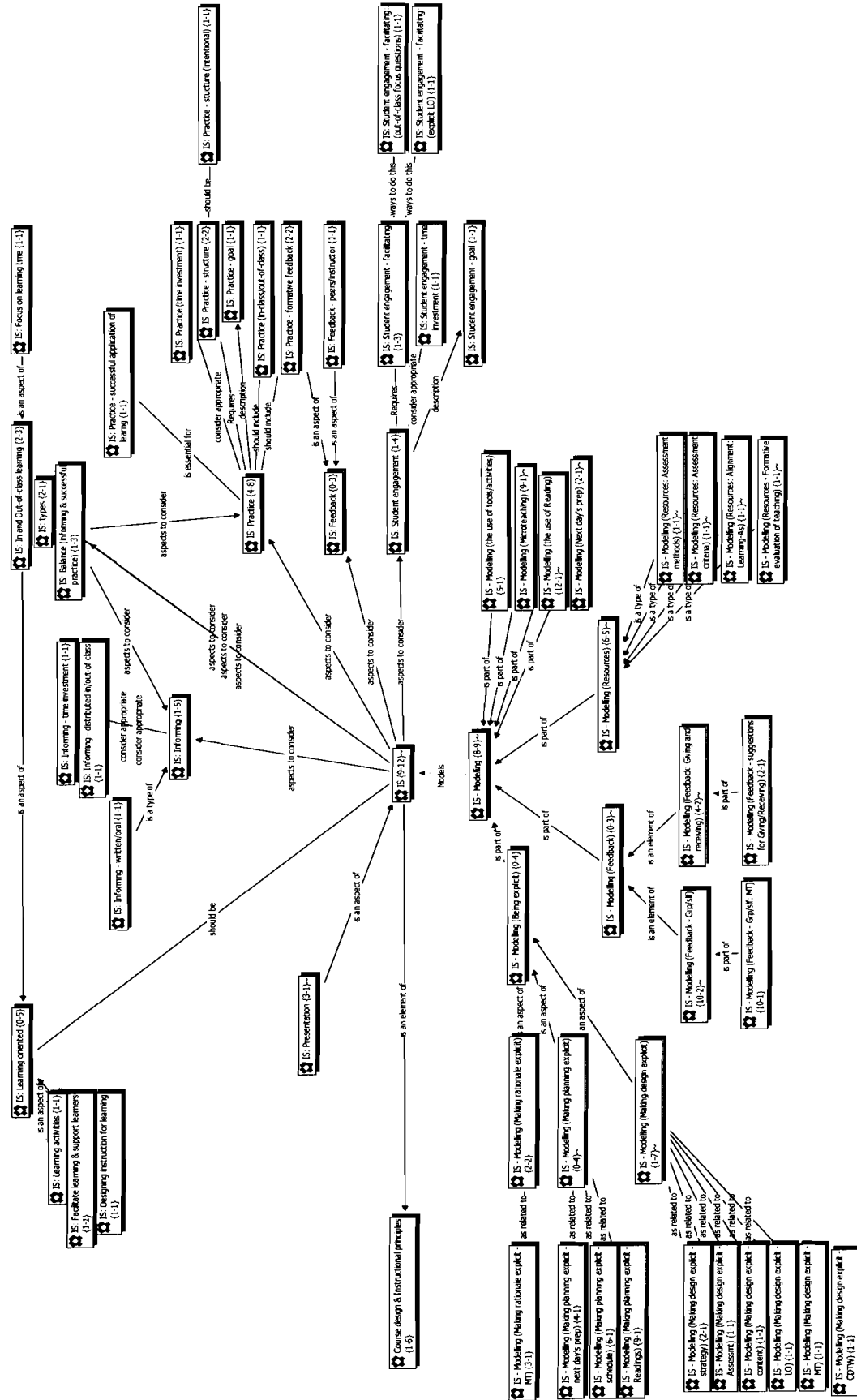
Other codes of interest under the modelling category were “IS-modelling (the use of reading)” (coding instances: 12) and “IS-modelling (Microteaching)”

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<sup>18</sup> Microteaching is a form of ‘practice-teaching’, where participants choose any content of interest to them, prepare for, and teach a short (10-15 minute) session to other workshop participants. These sessions are recorded for the participant’s viewing. After the session the ‘teacher’ outlines what his or her objectives were, requests and receives feedback from other workshop participants on whether his or her objectives were met.

(coding instances: 9). These codes possibly point to facilitators' use of readings and microteaching to inform about, and practice, the Workshop content.

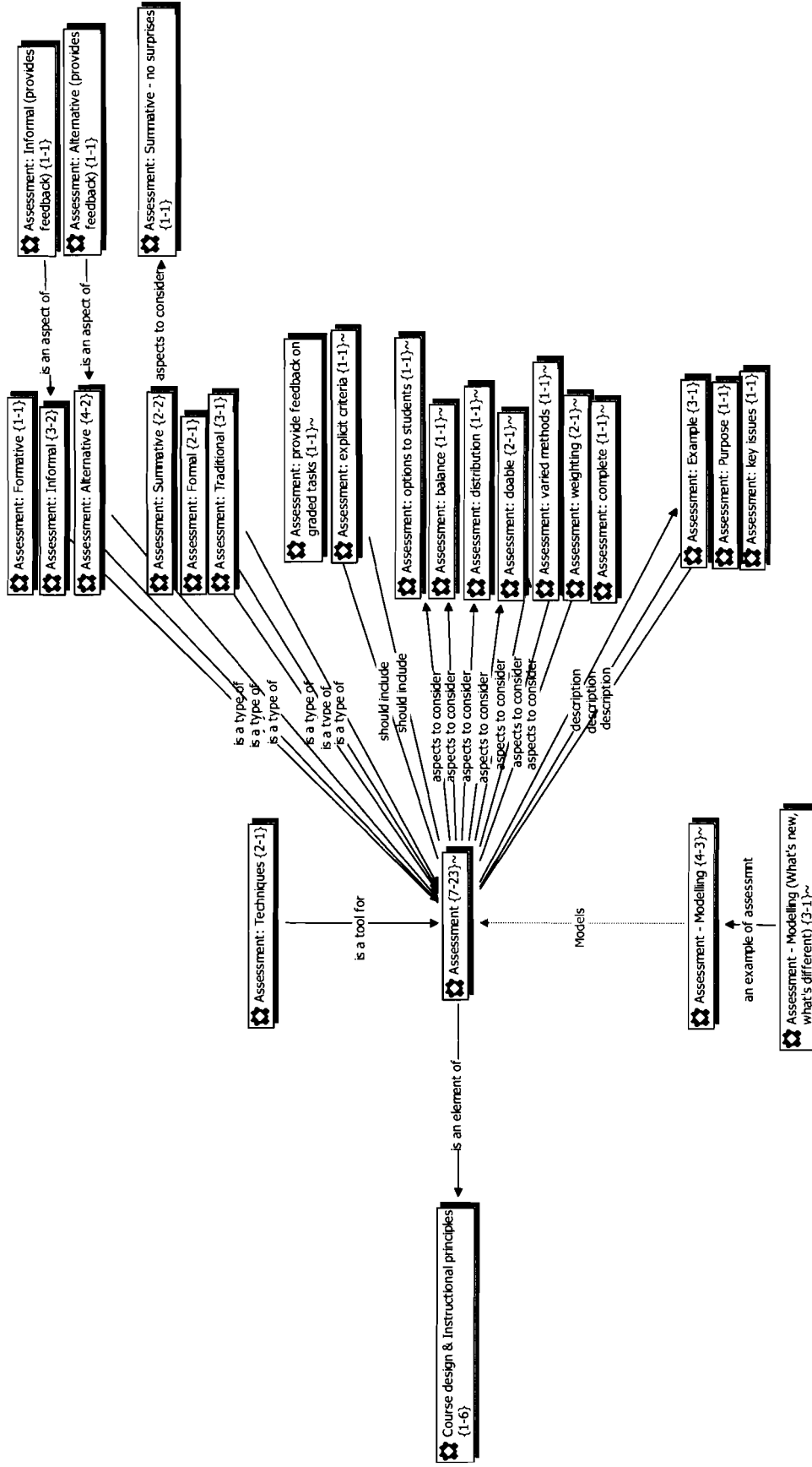
Figure 4-3: Instructional Strategies and its Sub- and Super-codes



**A priori Main Code: Assessment Methods:** It's interesting to note that though the main code "Assessment" is quite well grounded (total coding instances: 48, Figure 4-4), and has substantial density (23), most of its sub-codes lack depth, going down just one level. As mentioned previously, *groundedness* shows how often a code was present in the selected data, *density* indicates the number of connections to other related codes that were present in this data, and *depth* refers to the number of levels of sub-codes a code has, and could indicate the presence of sub-elements of a code. So, for example, the assessment code, with one level of sub-codes such as formative and summative assessment, could indicate a discussion of the concept of assessment within the data, and a deepening of this discussion to include the elements formative and summative assessment. If we see evidence of the presence of further sub-codes, it might indicate that the concepts of formative and summative assessment were discussed in some detail that included a discussion of the elements of these sub-codes.

The idea that the main code "Assessment" is quite well grounded but lacking depth is especially true with regard to the relationships falling under the sub-code "aspects to consider." The relationships falling within "types" of assessment (formal, informal, summative, formative, traditional, alternative) were dealt with in greater detail (total coding instances: 18), with some additional depth to the concepts informal, alternative, and summative assessment.

Figure 4-4: Assessment and its Sub- and Super-codes



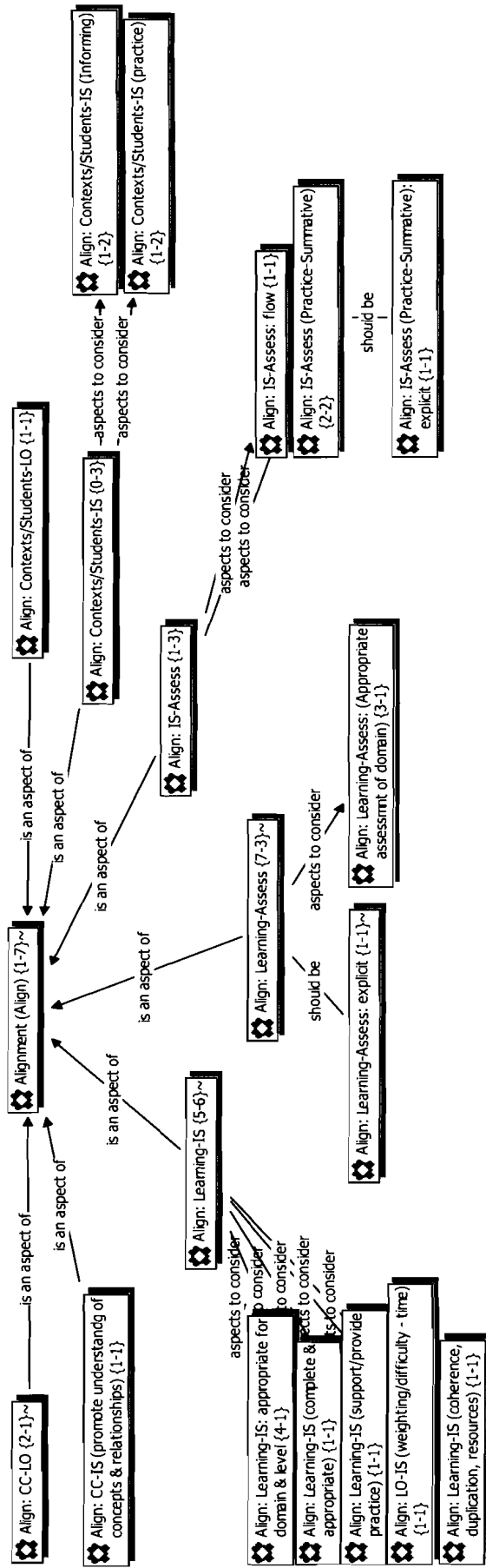


**A priori main Code: Alignment of Course Design Elements: “Alignment”**

(Figure 4-5, p. 95) was well-grounded and defined in the data (total coding instances: 36, density: 7). Of special note were the sub-codes “Align: Learning-IS” (5, 6) (the alignment between learning and instructional strategies) and “Align: Learning-Assess” (7, 3) (the alignment between learning and assessment methods). More time was devoted to these concepts than to others. Both these codes emphasized ensuring that the *domains* of learning were aligned with appropriate instructional strategies and assessment methods, respectively.

**Emergent Main Code: Course Outline:** Units of analysis that specifically referred to course outlines and their elements were coded under the Course outline code. It emerged as a well-grounded and dense code (Figure 4-6; total coding instances: 23, density: 7).

**Figure 4-5: Alignment and its Sub- and Super-codes**

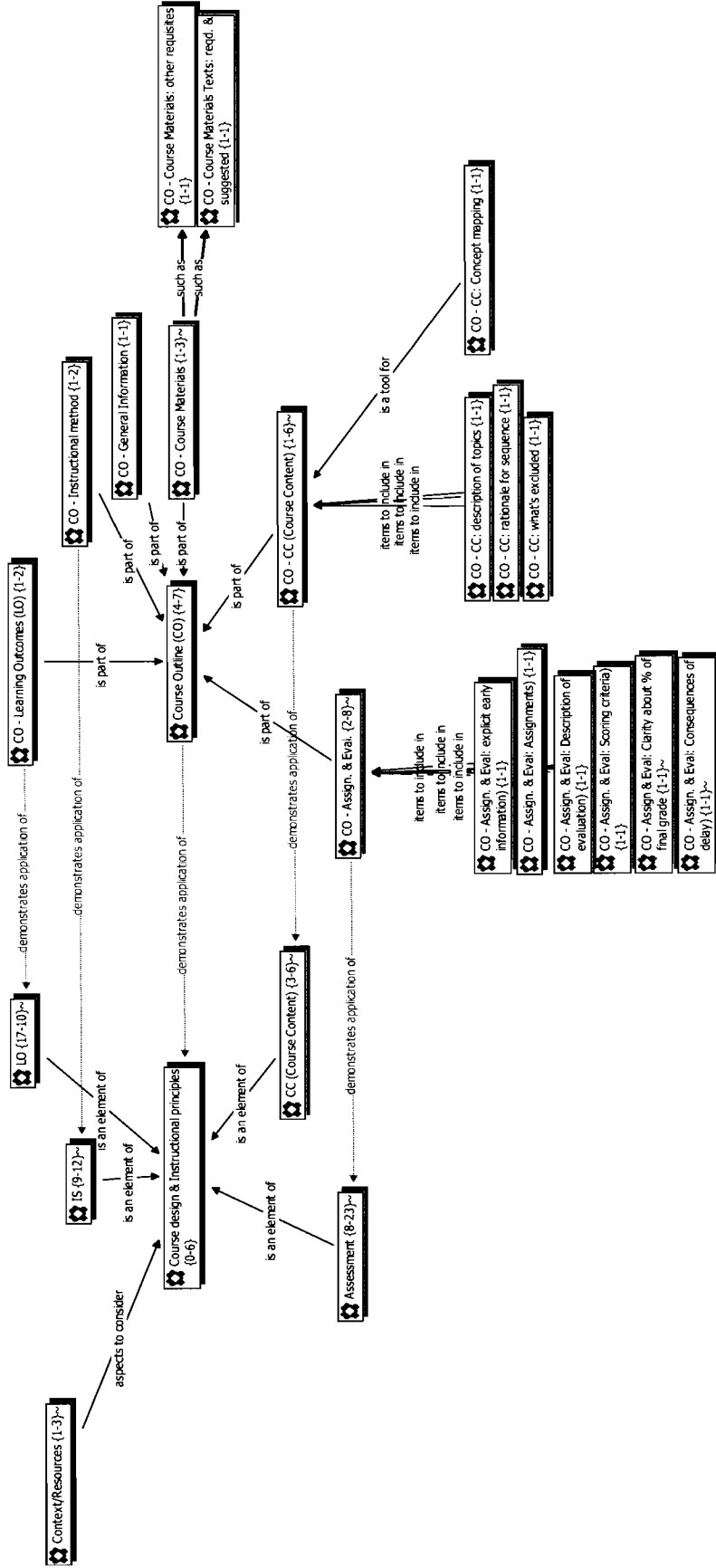


Some of the sub-codes for this code (CO: Learning Outcomes, CO: Instructional Methods, CO: Course Content, CO: Assignments and Evaluations) sound similar to the four key Workshop concepts, based on which the a priori codes were selected (analysis of course content, learning outcomes, instructional strategies, assessment methods). I suggest that these course outline elements are one application of these key Workshop concepts, and if well developed, point to a sound understanding of these concepts.

**Emergent Main Code: Context/Resources:** This code points to a suggestion that the key Workshop concepts should be considered in relation with the instructional, or student, context, an idea that is represented in the Workshop concept map (Introduction, Figure 1-1: Concept Map of the Workshop, p. 13). However this code is not well grounded (coding instance: 1) in the data (the Workshop binder and facilitator PowerPoint), that is, it has one coding instance in this data.

**Emergent Main Code: Course Design and Instructional Principles:** This code shows up in Figure 4.6, and is a free code (that is, it is not attached to any quotation in the data source), and was created as a conceptual super-code by me, as I thought through the conceptual relationship between different codes. This code, created as a super-code, is one under which the key Workshop concepts (the a priori main codes: analysis of course content, learning outcomes, instructional strategies, assessment, and alignment) fall.

**Figure 4-6: Course Outline and its Sub- and Super-codes**



For reader convenience, the total coding instances for each *main* code (a priori and emergent) are summarized in the Table below:

**Table 4-3: A Priori and Emergent Main Codes - Total Coding Instances**

<b>A priori</b>			
Course Content	: 20	Instructional Strategies	: 146
Learning Outcomes	: 37	Assessment Methods	: 49
Alignment	: 36		
<b>Emergent</b>			
Course Outline	: 23	Context / Resources	: 1
Course Design and Instructional Principles	: 0		

As mentioned earlier, these numbers should be viewed cautiously, keeping in mind that the instructional artefacts (the Workshop binder and Facilitators' PowerPoint slides) are just one view of the Workshop experience; the data set for this research did not include direct observations of the Workshop, which would provide a much more complex and rich view of these and other concepts.

The results of the coding for Analysis 1 were used as the foundation for Analysis 2. The codes and sub-codes from Analysis 1 were considered carefully, as possible a priori codes for Analysis 2. In doing this, I thought about the kinds of things I would find in a course outlines, and how the Analysis 1 codes might fit this thinking. Through this process, which included working with four course outlines as a trial, I found that certain codes are unlikely to be coded directly in a course outline (for example, 'balance', a code from Analysis 1, speaks to the idea of balance between two elements: in and out of class strategies, or informing and practice strategies, etc.).

A table comparing the use of codes in Analysis 1 and Analysis 2, and a point form outline of why certain Analysis 1 codes were excluded from Analysis 2, is provided in the Codebook (Appendix C: Analysis 2 Codebook, p. 144). You will also note in this table that Analysis 2 shows a few emergent sub-codes. Most often, these are related to specific kinds of detail that are to be found in actually creating a course outline, which might not show up in an explanation and discussion of course design (Analysis 1 artefacts). So, for example, Analysis 2 has a number of sub-codes related to 'intent': course content (intended), concept map (intended), etc. These codes would be used when an instructor shows a clear intention of including the item in question (for example, a statement on the course outline such as "include concept map here", or "due dates – to be added"). In addition, certain codes expanded, like the learning outcomes code, to include learning outcomes which didn't quite fit the three domains we were working with in the Workshop.

The next section details the results for Analysis 2.

### **4.3 Analysis 2**

Analysis 2 responds to the second thesis question:

What evidence is there of change, as related to key Workshop concepts, between participants' pre- and post-Workshop course outlines?

#### **4.3.1 Main Code: General Information**

The "General Information" code refers to the items of general information instructors provide in their course outlines. For a more detailed explanation of

what this code includes, and how it is coded, please refer to the Codebook (Appendix C: Analysis 2 Codebook, p. 156, p. 196). Table 4-4 provides examples of the kinds of items coded within the main 'General Information' code, to help the reader understand in a concrete way the variety of items included under this code. This code has the following sub-codes:

- i. general information,
- ii. general information(I),
- iii. course schedule, and
- iv. course schedule (I).

As explained in the Codebook (see Appendix C: Analysis 2 Codebook), the sub-codes ending with "(I)" refer to an *intention* to include the code. The code for General Information (including all its sub-codes; please see Table 4-5) had a groundedness of 203 in pre-Workshop course outlines, and 246 in post-Workshop course outlines. All 26 participants included "General information" in their course outlines both pre and post the Workshop. The average instances of general information provided went up slightly, from 8 items per course outline in pre-Workshop course outlines to about 9.5 items per course outline in post-Workshop course outlines.

As per the thinking outlined in Appendix C: Analysis 2 Codebook (p. 142) 16 discrete items should typically be coded under General Information in a course outline. The results indicate that the average number of items being coded in a course outlines went up from 8 in pre-Workshop course outlines to 9.5 in post-Workshop course outlines. Though this is not a prescriptive list, this does indicate that participants are not including all the items listed in Table 4-4.

**Table 4-4: Example of Types of Items within General Information**

• Number and title of course
• Semester / University/ Department
• Number of credits
• Name and title of the instructor, contact information
– Instructor office hours
• TA information: contact
– TA office hours
• Day, place and time of regular classes
• Prerequisites—particular courses, specific knowledge or skills a student should know before beginning the course (e.g., use of computer, ability to read architectural plans, etc.)
• Calendar course description (only if explicitly stated as a calendar course description)
• General academic policies
– Disability policy and resources; Academic Integrity, plagiarism, human rights
– <u>Exception</u> : instructor comments on how (s)he will deal with student plagiarism in her course is coded within the Assessment code (see Assessment section for more details)
• Attendance rules etc.
• Email interactions
• Format: lecture/lab/ <i>WebCT</i>
– <u>Note</u> : DO NOT format to be instructional strategies unless it is clear that the instructor is speaking about both, an instructional strategy and a format
• Making expectations explicit: “students are expected to ...,” etc.
• Websites and online information: General information about the course website, web space, etc
– <u>Exception</u> : online supplementary readings, course related readings, are coded under course materials. See this section for further information
• Course Schedules



**Table 4-5: General Information**

**Total coding instances across all Course Outlines**  
**Total # of course outlines: 26 \* 2**

	Pre	Y/N	Post	Y/N	Difference: pre/post
<b>GENERAL INFO</b>					
General Information	168		213		52
General Information (I)	9		16		-9
Course Schedule	25		13		
Course Schedule (I)	1		4		
<b>Total (all)</b>	<b>203</b>	<b>Y</b>	<b>246</b>	<b>Y</b>	<b>43</b>

The # of Course Outlines the Code was included in

	Pre	Post
<b># of Course Outlines including General Info</b>	<b>26</b>	<b>26</b>
Average instances / course outline	8	9

### 4.3.2 Main Code: Course Materials

The “Course Materials” code (Table 4-7) refers to course materials such as texts, equipment, learning management systems, and websites for a course; it also includes any information provided about these items. Please refer to the Codebook (Appendix C: Analysis 2 Codebook, p. 159, p. 197) for further details about rationales and coding rules. The “Course Materials” code includes the following sub-codes:

- i. Course Materials
- ii. Course Materials (I)
- iii. Course Materials: General Information

Table 4-6 provides examples of the kinds of items coded under this code.

**Table 4-6: Examples of Types of Items Coded Under Course Materials**

<ul style="list-style-type: none"><li>• Specific information about required texts, including title, author(s), edition number; additional handouts and other materials; readings which have been placed on reserve in the library should be indicated; suggested and reference texts should be listed.  <u>Note:</u> It should be clear what is required reading as opposed to suggested reading.</li></ul>
<ul style="list-style-type: none"><li>• Equipment required for the course (for example, video cassettes, specific types of calculators, etc.)</li></ul>
<ul style="list-style-type: none"><li>• Course learning management systems, Course websites, etc.</li></ul>
<ul style="list-style-type: none"><li>• General information about where texts and resources can be purchased or borrowed.</li></ul>

Course materials had a groundedness of 158 in pre-Workshop course outlines, and 114 in post-Workshop course outlines. Most (24 of 26) Workshop participants provided information about course materials prior to attending the Workshop, whereas all twenty-six participants provided this information in their post-Workshop course outlines. The average occurrence of the “Course Materials” code per course outline were 7 in pre Workshop course outlines, and 4.4 in post Workshop course outlines. However, one participant had provided a large number of course materials in her pre-Workshop course outline; on excluding this person’s course material information, the average coding instance per course were 4 in pre-Workshop course outlines and 4.4 in post-Workshop course outlines.

As per Appendix C: Analysis 2 Codebook (p. 159), my interest in this code was to examine the presence of course materials, and general information related to course materials, in participants pre- and post-Workshop course outlines. In line with this, the results of interest here are: course materials were included in 24 pre-Workshop course outlines and in all 26 post-Workshop course outlines. In addition, 15 pre- and post-Workshop course outlines included general information on course materials (though the pre- and post-Workshop course outlines were not identical).

**Table 4-7: Course Materials**

Total coding instances across all Course Outlines  
Total # of course outlines: 26 \* 2

	Pre	Y/N	Post	Y/N	Difference: pre/post
<b>COURSE MATERIALS</b>					
Course Materials	134		88		
Course Materials (I)	2		2		
Course Materials: General Info	22		24		
<b>Total (all)</b>	<b>158</b>	<b>Y</b>	<b>114</b>	<b>Y</b>	<b>-44</b>

The # of Course Outlines the Code was included in

	Pre	Post
<b># of Course Outlines including Course Materials</b>	<b>24</b>	<b>26</b>

*Subset (outlines using code):*

Average instances / course outline	7	4
<i>After removing an outlier:</i>	4	

### **4.3.3 Main Code: Course Content**

The “Course Content” code (Table 4-8) refers to descriptions or a sequence of course topics, course themes, goals or objectives, a course concept map, etc.

Please refer to the Codebook (Appendix C: Analysis 2 Codebook, p. 161, p. 197) for details and explanations about items included within this code, and the associated coding rules. The “Course Content” code includes the following sub-codes:

- i. Course Content
- ii. Course Content (topic list)
- iii. Course Content (I)
- iv. Concept Map
- v. Concept Map (I)
- vi. Course Content: MRE (Making Rationale Explicit)

Course content had a groundedness of 46 in pre-Workshop course outlines, and 66 in post-Workshop course outlines, though all 26 course outlines included a section on course content in both pre and post-Workshop course outlines. Most of this increase came from an increase in the use of concept maps in post-Workshop course outlines. Concepts maps had a groundedness of 1 in all pre-Workshop course outlines, and 25 in all post-Workshop course outlines.

As pre the rationale for this coding provided in Appendix C: Analysis 2 Codebook (p. 161), my interest in coding these various items was to check for presence, and quality if possible, of the items. Multiple instances of coding were note of particular interest. In line with this thinking, the items to note are: all course outlines included a course content section in some form both pre- and

post-Workshop. Concept maps were included in 1 pre-Workshop course outline and in 17 post-Workshop course outlines, which is a noteworthy increase. Six pre-Workshop course outlines and 5 post-Workshop course outlines included a rationale for the course content

**Table 4-8: Course Content**

**Total coding instances across all Course Outlines**

**Total # of course outlines: 26 \* 2**

**The # of Course Outlines the Code was included in**

	Pre	Y/N	Post	Y/ N	Difference: pre/post
CC: Concept Map	1		24		
CC: Concept Map (I)	0		1		
<b>Total</b>	<b>1</b>		<b>25</b>		<b>24</b>
<b>COURSE CONTENT</b>					
CC: Course Content	25		25		
CC: Course Content (I)	1		1		
CC: Course Content (topic list)	13		10		
<b>Total</b>	<b>39</b>		<b>36</b>		<b>-3</b>
CC: MRE	6		5		
<b>Total (all)</b>	<b>46</b>	<b>Y</b>	<b>66</b>	<b>Y</b>	<b>20</b>

	Pre	Post
<b># of course outlines including Concept Mapping</b>	<b>1</b>	<b>17</b>

<b>Course Content</b>	<b>26</b>	<b>26</b>
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#### **4.3.4 Main Code: Learning Outcomes**

The “Learning Outcomes” code (Table 4-9) refers to clear statements of knowledge, competencies, or attitudes related to student learning within a course. Usually, but not always, such statements were clearly labelled in the course outlines as learning outcomes. Please refer to the Codebook (Appendix C: Analysis 2 Codebook, p. 163, p. 198) for details and explanations about items included within this code, and the associated coding rules. The “Learning Outcomes” code includes the following sub-codes:

- i. Learning Outcomes
- ii. Learning Outcomes – Affective
- iii. Learning Outcomes – Cognitive
- iv. Learning Outcomes – Psychomotor
- v. Learning Outcomes – Communication
- vi. Learning Outcomes – Skills
- vii. Learning Outcomes – Making Rationale Explicit
- viii. Learning Outcomes – Uncertain

Most of these sub-codes are further subdivided, to reflect the levels of learning within each domain (for example, the cognitive domain has three levels of learning within it: knowing, understanding, and thinking), and details about these sub-divisions can also be found in the Codebook (Appendix C: Analysis 2 Codebook, p. 163).

Learning outcomes had a groundedness of 54 in pre-Workshop course outlines, and 157 in post-Workshop course outlines.



As per the rationale provided in Appendix C: Analysis 2 Codebook (p. 163) with regard to coding learning outcomes, my interest was to examine participants' pre- and post-Workshop course outlines for presence and quality. The results of interests to this line of thought are: Five pre-Workshop course outlines used learning outcomes, where as all 26 post-Workshop course outlines used them.

With regard to quality, each learning outcome in a course outline was further evaluated to check whether it was:

- Codeable
- Assessable
- Concise
- Learning centred, and
- Clear.

This was done in the following way: for every course outline, each learning outcome was checked for these five criteria (above), and marked with a yes/no response. The percentages of yes and no responses for each criterion, for each course outline, was calculated, and an average percentage for each criterion, for all pre and post-Workshop course outlines was calculated. Based on this calculation, both pre- and post-Workshop learning outcomes scored quite high for each criterion (exact percentages can be seen in Table 4-9: Learning Outcomes). In pre-Workshop course outlines, over 90% of the learning outcomes met four of the above five criteria; the one criterion falling below this level was clarity (84%). In post-Workshop course outlines, 86% of the learning outcomes met each of these criteria. Further details of this evaluation can be found in the

Codebook (Appendix C: Analysis 2 Codebook, p. 174), and reviewed in the Master Results Table (available upon request. This is an excel workbook in which I collate the results of all the coding, and based on which I analysed and summarized my results).

These results suggest that the number of course outlines including learning outcomes increased by a large number, and the quality of learning outcomes in both pre- and post-Workshop course outlines, as per my criteria above, was good.

**Table 4-9: Learning Outcomes**

Total coding instances across all Course Outlines

Total # of course outlines: 26 \*2

The # of Course Outlines the Code was included in

	Pre	Y/N	Post	Y/N	Difference: pre/post
LO: (I)	1		3		
LO: Uncertain	2		7		
LO: Uncertain LOE	0		1		
<b>TOTAL</b>	<b>3</b>		<b>11</b>		<b>8</b>
<b>LEARNING OUTCOMES</b>					
LO: A1-Attention	1		3		
LO: A2-Respond	0		2		
LO: A3-Value	0		1		
LO: A4-Judging	1		2		
LO: A5-Adhere	1		6		
<b>TOTAL</b>	<b>3</b>		<b>14</b>		<b>11</b>
LO: C1-Knowing	16		30		
LO: C2-Understanding	16		34		
LO: C3-Thinking	13		59		
<b>TOTAL</b>	<b>45</b>		<b>123</b>		<b>78</b>

(table continued on next page)

Participants using		Pre	Post
<b># of course outlines including Learning Outcomes</b>		<b>5</b>	<b>26</b>
<b>Total courses with codeable learning outcomes</b>		<b>5</b>	<b>26</b>

**Subset: courses with codeable learning outcomes:**

Average codeable learning outcomes per course	93%	86%
Assesseable	94%	92%
Concise	90%	86%
Learning centered	100%	96%
Clear	84%	86%

LO: P1-Perception	0	3	
LO: P2-Set	0	2	
LO: P3-Guided Response	0	0	
LO: P4-Mechanism	1	2	
LO: P5-COR	1	0	
LO: P6-Adaptation	0	0	
LO: P7-Origination	0	0	
<b>TOTAL</b>	<b>2</b>	<b>7</b>	<b>5</b>
LO: Communication (?)	1	1	
LO: Skills	0	1	
<b>TOTAL</b>	<b>1</b>	<b>2</b>	<b>1</b>
<b>Total (all)</b>	<b>54</b>	<b>157</b>	<b>103</b>

#### **4.3.5 Main Code: Instructional Strategies**

The “Instructional Strategies” code (Table 4-10) refers to descriptions of instructional approaches that the instructors planned to use in the course (e.g., lectures, seminars, laboratory work, clinical activities, group projects, etc.).

Please refer to the Codebook (Appendix C: Analysis 2 Codebook, p. 175, p. 199) for details and explanations about items included within this code, and the associated coding rules. The “Instructional Strategies” code includes the following sub-codes:

- Instructional Strategies (I)
- Instructional Strategies: Making Rationale Explicit
- Instructional Strategies: Feedback
- Instructional Strategies: Feedback (I)
- Instructional Strategies: Informing
- Instructional Strategies: Informing (I)
- Instructional Strategies: Practice
- Instructional Strategies: Practice (I)
- Instructional Strategies: Other
- Instructional Strategies: Other (I)
- Instructional Strategies: In Class
- Instructional Strategies: In Class (I)
- Instructional Strategies: Out of Class
- Instructional Strategies: Out of Class (I)

As is indicated in the sub-codes, I was able to code a distinction between informing and practice strategies and in and out-of-class strategies, when this was made explicit enough in the course outline. The coding of instructional strategies was an interesting exercise and a complex code for various reasons, a

few of which are: (i) course outlines are not the natural vehicle for instructional strategies<sup>19</sup> (ii) without interviewing each instructor, coding instructional strategies tends towards higher levels of inferences than other codes; (iii) these strategies are often implicit in an instructor's thinking, and occur throughout the course outline, embedded within various sections of the course outline – this lends itself to repetitive coding, and requires careful thought about when and where such strategies should be coded. This issue, and the related coding challenges and negotiations, and examples for each of the sub-codes are discussed further in the Codebook (Appendix C: Analysis 2 Codebook, p. 178).

Keeping this discussion in mind while reviewing the results is essential as, for example, though the results indicate how often instructional strategies were mentioned and how many instructors mentioned them, this does not necessarily indicate that other instructors were not planning to use various, similar instructional strategies in their courses.

Feedback, a sub-code under the main code Instructional Strategies, had a groundedness of 9 in pre-Workshop course outlines, and 19 in post-Workshop course outlines. Some examples of the kind of items that would have been coded under 'Feedback' are:

- (i) Assignments with formative feedback 20%;

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<sup>19</sup> This point was highlighted during a member-check of this analysis. The workshop participant doing the member check pointed out that the lack of instructional strategies in a course outline does not necessarily mean that various strategies would not be used in the course. It simply means that these strategies were not outlined in the course outline, which is entirely appropriate given the nature, and use, of the course outline.

(ii) Your classmates will give you a written feedback based on the following criterion:

- Introduction (way to raise attention, announcement of the topic)
- Characteristics of the explanations (Clarity, structure, adaptation or adjustment to the student(s), use of examples, use of means (practical examples, drawings, exercises etc.));
- Communication abilities (stimuli variation: voice, gesture, sight, movements; verification of comprehension, interaction, answers to questions, listening)
- Conclusion (synthesis)

The groundedness of informing strategies (such as readings, lectures, etc.) decreased from 87 instances in pre-Workshop course outlines to 68 in post-Workshop course outlines. Strategies coded as “practice” and “other” increased in groundedness from 41 instances in pre-Workshop course outlines to 63 in post-Workshop course outlines. An example each, of “practice” and “other” is:

- (i) Other: The class will hold WebCT discussions and rely on documents posted on the class website.
- (ii) Practice: Each lab period there will be planned exercises to reinforce concepts seen in class, as well as exercises used to introduce new concepts. All lab assignments will be handed out during the lab period, and due at the end of the lab period.

However, as per Appendix C: Analysis 2 Codebook (p. 175) my interest in examining participants' pre- and post-Workshop course outlines was to examine (i) the presence of feedback strategies in the course outlines, (ii) the presence of informing and practice strategies in the outlines, and (iii) the distribution of these strategies both in and out of the classroom.

The numbers of course outlines explicitly including feedback as an instructional strategy went up from 9 to 19. Course outlines using *informing* strategies *both in and out-of-class* in their course outline also went up from 7 in pre-Workshop course outlines to 12 in post-Workshop course outlines. Those indicating the use of *practicing* strategies *both in-and out-of-class* went up from 1 in the pre-Workshop course outlines to 2 in the post-Workshop course outlines, and those indicating the use of both *informing and practice* strategies went up from 14 in the pre-Workshop course outlines to 19 in the post-Workshop course outlines. The average ratio of the groundedness of informing strategies to that of the sum of practice and other strategies (calculated using only those participants who used both) was 2.55 : 1.73 in the pre-Workshop course outlines and 3.00 : 2.63 in the post-Workshop course outlines.



**Table 4-10: Instructional Strategies**

Total coding instances across all Course Outlines  
Total # of course outlines: 26 \* 2

	Pre	Y/N	Post	Y/N	Difference: pre/post
IS: (I)	1		1		
IS: MRE	2	Y	4	Y	2
IS: Feedback	8		18		
IS: Feedback (I)	1		1		
Total	9	Y	19	Y	10
<b>Total (IS, Feedback, MRE)</b>	<b>12</b>		<b>24</b>		<b>12</b>
IS: I/P/O- Informing	84		67		
IS: I/P/O- Informing (I)	3		1		
Total	87	Y	68	Y	-19
IS: I/P/O- Other	32		54		
IS: I/P/O- Other (I)	4		2		
IS: I/P/O- Practice	4		5		
IS: I/P/O- Practice (I)	1		2		
Total	41	Y	63	Y	22
IS: I/O- In Class	35		47		
IS: I/O- In Class (I)	1		1		
Total	36	Y	48	Y	12
IS: I/O- Out of Class	70		47		
IS: I/O- Out of Class (I)	0		1		
Total	70	Y	48	Y	-22

**INSTRUCTIONAL STRATEGIES**

The # of Course Outlines the Code was included in

# of Course Outlines using	Pre	Post
Feedback	9	19
Informing + (in & out) of class strategies	7	12
Practice + (in & out) of class strategies	1	2
Informing + (practice / other) strategies	14	19

(Subset) Outlines with both informing & practice/other strateg.  
in & out-of-class strategies      **11**      **18**

**Average ratio (subset):**

Course Outlines with both Informing and Practice/Other

	Informing :	Practice/Other
Pre-Workshop	2.55	2.00
Post-Workshop	3.00	3.00

#### **4.3.6 Main Code: Assessment**

Assessment includes two main codes, Assignments and Assessment (Table 4-11: Assignment & Evaluation & Table 4-12: Assessment) and related sub-codes as outlined below:

i. With regard to *Assignments*, I was interested in examining if instructors provided assignment details to students on the course outline: that is, the name of the assignment, percentage of the final mark, and details for each assignment. At a second level, I also wanted to explore if (i) instructors clarified their rationale for assignments, and (ii) whether they provided some structure within assignments to support students as they work through them. Hence, the analysis focused on whether assignment names, percentages of final mark, and details about the rationale and structure were present in the course outline. The “Assignments” code includes the following sub-codes:

- Assignment / Evaluation: General Information
- Assignment / Evaluation: General Information (I)
- Assignment: Name & Mark
- Assignment: Name & Mark (I)
- Assignment: Details
- Assignment: Details (I)
- Assignment: Structure
- Assignment: Structure (I)
- Assignment: Making Rationale Explicit (MRE)

More detailed information on this code, including information on how it was coded, can be found in Codebook (Appendix C: Analysis 2 Codebook, Assignment and Related Information, p. 186).

ii. With regard to *Assessment*, I wanted to know whether an instructor provided a rationale, assessment criteria, options to students (with regard to how they are assessed, flexibility with regard to presentation, etc.), and used varied assessment methods. Additionally, did (s)he distribute assessment over the semester as opposed to clumping it at the end of the semester. This code includes the following sub-codes:

- Assessment: Criteria
- Assessment: Explicit Criteria
- Assessment: Criteria (I)
- Assessment: Options to Students
- Assessment: Distribution
- Assessment: Distribution (I)
- Assessment (I)

More detailed information on this code, including information on how it was coded, can be found in Codebook (Appendix C: Analysis 2 Codebook, pg. 191).

The main “Assignments” code (including all sub-codes, Table 4-11: Assignment & Evaluation) had a groundedness of 197 in pre-Workshop course outlines and 284 in post-Workshop course outlines. Groundedness for all sub-codes went up substantially, as can be seen in Table 4-11.

As per my rationale in Appendix C: Analysis 2 Codebook (p. 185) my interest in coding assignments was to examine the pre- and post-Workshop

course outlines for the presence of Assignment (i) names and marks, (ii) details, (iii) rationales, and (iv) structure. The results as related to this thinking are: twenty-three pre-Workshop course outlines and 26 post-Workshop course outlines provided Assignment names and marks. Fifteen pre-Workshop course outlines provided Assignment information and details about course assignments, and 22 post-Workshop course outlines did so. Three pre-Workshop course outlines and 5 post-Workshop course outlines put forward a rationale for an assignment. Five pre-Workshop outlines and 8 post-Workshop ones provided some structure related to an assignment. These results would suggest that the number of course outlines including the Assignment sub-codes increased, and this was specially visible in the case of Assignment details.

The main code "Assessment" (inclusive of sub-codes Assessment (I), Assessment: Options, and Assessment: Criteria, please see Table 4-12: Assessment) had a groundedness of 20 in pre-Workshop course outlines and 25 in post Workshop course outlines.

As per my codebook rationale for Assessment, the items I was interested in exploring within this concept were the presence of (i) assessment criteria, (ii) assessment options, (iii) the use of varied methods, and (iv) the distribution of assessment over the semester. The results related to this line of thinking are as follows: (i) assessment criteria were included in 8 pre-Workshop course outlines, and in 10 post-Workshop course outlines, (ii) assessment options were included in 4 pre-Workshop course outlines and in 3 post-Workshop ones, (iii) the use of varied methods is a secondary analysis, and was not carried out. This analysis

needs further thought with regard to what constitutes varied methods, is it sufficient for there to be varied methods or do we need to look at this in conjunction with alignment of such methods with learning outcomes, etc., and (iv) course outlines that showed assessment distributed over at least 3 months of the semester moved up a little from 12 pre-Workshop to 14 post-Workshop. However, most of the remaining course outlines were coded as “Assessment: Distribution (?)”; this code indicates that there are various assignments for which due dates have not been provided, and as such, once the due dates for these assignments are thought through, they might well be distributed over the semester in a balanced way. Therefore, the results for assessment distribution are inconclusive. As such, other than Assessment criteria, which has been adopted by additional course outlines, the Assessment results do not show much change.

The Discussion chapter follows and elaborates on my thinking of these results, and discusses certain issues and implications related to this research.

**Table 4-11: Assignment & Evaluation**

Total coding instances across all Course Outlines

Total # of course outlines: 26 \*2

	Pre	Y/N	Pos	Y/N	Difference:
			t		Pre/post
Assign&Eval: General Info	19		41		
Assign&Eval: General Info (I)	1		1		
<b>Total</b>	<b>20</b>	<b>Y</b>	<b>42</b>	<b>Y</b>	<b>22</b>
Assignment: Details	44		71		
Assignment: Details (I)	4		9		
<b>Total</b>	<b>48</b>	<b>Y</b>	<b>80</b>	<b>Y</b>	<b>32</b>
Assignment: Name&Mark	115		136		
Assignment: Name&Mark (I)	1		3		
<b>Total</b>	<b>116</b>	<b>Y</b>	<b>139</b>	<b>Y</b>	<b>23</b>
Assignment: Structure	6		11		
Assignment: Structure (I)	0		1		
<b>Total</b>	<b>6</b>	<b>Y</b>	<b>12</b>	<b>Y</b>	<b>6</b>
Assignment: MRE	7		11		
<b>Total (all)</b>	<b>197</b>		<b>284</b>		<b>87</b>

The # of Course Outlines the Code was included in

# of Course Outlines using	Pre	Post
Assignment Name & Mark + Details	15	22
Assignment Structure	5	8



**Table 4-12: Assessment**

**Total coding instances across all Course Outlines**

**Total # of course outlines: 26 \*2**

	Pre	Y/N	Post	Y/N	Difference: pre/post
Assess (I)	1		0		
Assess: Options	4		3		-1
Assess: C-Criteria	6		6		
Assess: C-Criteria (I)	1		5		
Assess: C-Explicit Criteria	8		11		
<b>Total (Criteria)</b>	<b>15</b>	<b>Y</b>	<b>22</b>	<b>Y</b>	<b>7</b>
<b>Total</b>	<b>20</b>	<b>Y</b>	<b>25</b>	<b>Y</b>	<b>5</b>
Assess: Distributn (?)	34		38		4
Assess: Distributn (I)	4		8		4
Assess: Distributn (M01)	9		12		3
Assess: Distributn (M02)	19		24		5
Assess: Distributn (M03)	20		22		2
Assess: Distributn (M04)	27		38		11
Assess: Distributn (W06)	0		2		2

The # of Course Outlines the Code was included in:

# of Course Outlines using	Pre	Post
Assessment Criteria (Explicit, basic, or intended)	8	10
Assessment Options	4	3
Assessment distributed over 3 months / 4 weeks (Y)	12	14
Assessment distributed over 3 months / 4 weeks (N)	14	12
Subset of (N) above Participants with Distribution as '?'	10	11

## **5: DISCUSSION**

In this chapter I discuss, how this research responds to issues from the literature review, and some interesting observations from the results for both the research questions. I follow this up with a section on future research related to the Workshop, and some more general implications of this research for the area of Faculty Development.

### **5.1 Research Question 1: Observations**

The literature review for this research indicated that there was no other research in the area that examined the integrity of a faculty development initiative, though various researchers (McAlpine, Amundsen, Clement, & Light, under review; Kreber & Brooks, 2001) have called for such work over the last few years. As such, this work fills a gap in the literature

The lack of this literature would suggest that even faculty development initiatives evaluating their work are assuming an alignment between what they plan to teach in a faculty development workshop, and what and how they actually teach. This in itself is problematic, as we know from earlier research that espoused theories about teaching often differ from actual theories in use (Argyris & Schon, 1974; Kane, Sandretto, & Heath 2002).



### **5.1.1 Discussion of Results**

The findings from this research suggest that the Workshop does have integrity, that is, its instructional artefacts do in fact show evidence of key Workshop concepts which are in general, extensively taught within the Workshop (please see the various Tables and discussions in Chapter 4).

Analysis 1 confirmed, however, that the concept of assessment was not dealt with in great depth. Though the assessment code is well grounded in the data, its network map (Results, Figure 4-4) shows little depth (that is, various topics related to assessment are touched on, but smaller elements of these concepts do not seem to have been dealt with in detail). This could be a consequence of the coding scheme used for the analysis. For example, feedback is a reasonably well developed sub-code which could potentially be coded under Assessment or Instructional strategies. If coded under Assessment, it would have added depth to the this code's network, but it was eventually coded under Instructional Strategies. Another reason for the apparent lack of depth could be that the concept of Assessment is dealt with towards the end of the Workshop, which offers little opportunity to re-integrate it with other Workshop ideas. Such re-integration would probably increase the depth of this concept's network map in this Analysis.

With regard to modelling of valued concepts, the analysis suggested that firstly, certain concepts were modelled, but not made extensively explicit in the artefacts. Two such examples are the use of feedback as an instructional strategy, and the importance of being explicit in one's teaching (Figure 4-3:

Instructional Strategies and its Sub- and Super-codes). If these are strategies that Workshop facilitators would like participants to consider using, they should make them more explicit. It is of course entirely possible that these concepts were made explicit in the Workshop through discussion and dialogue, and this has not been captured in this analysis.

Secondly, the Workshop facilitators seem to have modelled some concepts more extensively than others. For example, instructional strategies were modelled to a greater degree than learning outcomes or the analysis of course content. This could be either because some concepts were better embedded within the facilitators' practice than others, or because there were more opportunities (based on the nature of the concept, for example) to model a concept such as instructional strategies, than there were to model learning outcomes. This discussion raises the interesting question of the importance of congruence in our implicit and explicit teaching, which could be explored further conceptually, in the future.

The findings from Analysis 1 do in general adhere to the notion of alignment between espoused theories and theories in use (Argyris & Schon, 1974; Kane, Sandretto, & Heath, 2002), though variably, and indicate that the Workshop facilitators' espoused theories of instruction (as represented by the key Workshop concepts) were well aligned with their theories-in-use as visible in the presence of these concepts in the artefacts.

One last observation related to the results of this analysis relates to the emergent code 'context'. This concept is actually a part of the Workshop concept

map (Introduction, Figure 1-1: Concept Map of the Workshop), but was not included as an a priori code for this analysis. Even as an emergent code, it is not very well grounded in the data. I am not sure why this was the case, but would suggest that addressing this concept in greater depth is valuable, as it is central to developing a well contextualized course design and course outline (for example, the physical arrangement of a classroom will often limit, or not, the teaching and learning strategies or methods that can be implemented).

## **5.2 Research Question 2: Observations**

The literature reviewed for my second research question, that is literature with a goal of influencing practice while using participant artefacts in the analysis of impact, highlighted some issues related to (i) the lack of clarity and information surrounding the evaluation of the initiative (or in one instance reverting simpler forms of evaluation as the main form of evaluation)<sup>20</sup> (ii) the lack of details and transparency related to methodology and data analysis, and (iii) the lack of congruence between the goals, data collected, and results reported within an initiative<sup>21</sup>.

The research described in this thesis is careful to respond to these issues. For example, with regard to evaluation, I do a pre / post analysis of course

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<sup>20</sup> In one instance an initiative provided no details about the external evaluation carried out, or what it entailed, while the available evaluation seemed to be at once again at the level of participant satisfaction and informally at the level of student perceptions (Hanson & Moser, 2003). Beaty (1999) provided almost no information about how participants' artefacts, and hence participants, were evaluated within the initiative. This lack of clarity sometimes extends to suggestions of changes in courses designed (Hyman, 1996).

<sup>21</sup> While some initiatives put forth well aligned initiatives (Goodnough, 2006; Halliday & Soden, 1998), this was problematic in various other literature (Hanson and Moser, 2003; Brew and Barrie, 1999; Rowland, 1999 and Rowland and Barton, 1994; Hyman, 1996).

outlines, which might be reasonably argued to be an instructors' preliminary theory-in-use (please see chapter 1 for a further discussion on this). In addition, I have clearly outlined the data used, provided clear and transparent information on evaluation, the data analysis, methodology, and results. The congruence between the goals of this research, the data collected, and the results reported have also been carefully thought through.

It was also clear from my review of the faculty development literature that document analysis, as used in this research has not, to my knowledge, been used previously. Winton and Catlett (1997) conducted a content analysis, however no details about the methodology or the analysis are provided, and as such I cannot judge the level of similarity of this work to my research. Goodnough (2006) used a grounded research approach and the constant comparison method of analysis suggesting that the data analysis may have been similar to this document analysis. Goodnough's use of a variety of data sources to examine her own practice, and understand the value of Problem Based Learning is very interesting, but again, as there is very little information about the actual analysis, I cannot comment with any confidence on the similarities of this work to mine.

The use of pre / post analysis with participant artefacts as found in the study conducted by Winton & Catlett (1997) also lacks clarity around the data used and the analysis itself. A rigorous pre / post document analysis using participants' artefacts is one way, I would suggest, of evaluating faculty development initiatives and should be used more often. This research uses a combination of these methodologies rigorously in ways that have implications for future

evaluative research in the area of Faculty Development, and in light of the gaps in the literature reviewed, is a useful addition to the present literature.

### **5.2.1 Discussion of Results**

There was in general, an increase in the presence of the four key concepts in the post –Workshop course outlines, though the increase in groundedness was somewhat varied between concepts. For example, there was a marked increase in the number of course outlines using concept mapping, learning outcomes, and feedback strategies. Concept mapping (please see Table 4-8) went up from 1 in pre-workshop course outlines to 17 in post-workshop outlines. Though the groundedness of the concept mapping code from Analysis 1 is quite low, it possibly does not accurately reflect the amount of time participants spent on concept mapping during the Workshop. Participants spend most of the first day of the Workshop working on their concept maps, and the increase in post-workshop course outlines could be a consequence of this. Another interesting point to note here is that the use of concept maps in course outlines was not suggested by Workshop facilitators, but was the participants' own decision<sup>22</sup>.

Learning outcomes is another concept that showed up in only 5 pre-workshop course outlines, and in all 26 post-workshop course outlines. As mentioned in Chapter 1 (p. 15), such outcomes provide clarity and focus to the

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<sup>22</sup> The importance of the concept mapping should, I believe, be underscored. Much of the present literature investigating concept mapping focuses on its value for novice learners to develop conceptual understanding. In the Workshop, professors as experts in their disciplines, often find concept mapping to be a useful tool for clarifying and analysing the content of the course they are designing. Amundsen, Weston, & McAlpine (2008, in press) argue that 'one of the reasons why concept mapping is effective as a way to explicate subject matter understanding is because the basic structures of major concepts and the visual depiction of the relationships among them constitute two of the ways a discipline can be understood' (p. 10).

design of instruction, and are valuable tools for checking coherence within a course. It is interesting to note though, that when looking at the subset of codeable learning outcomes the quality of the learning outcomes (that is, the percentages of learning outcomes that show up as assessable, concise, and learning centred) is higher in the pre-Workshop course outlines than in the post-Workshop course outlines (please see Results, Table 4-9: Learning Outcomes, p. 112). This *could* be because the five participants who used learning outcomes in pre-Workshop course outlines were familiar, and experienced, with the use of learning outcomes, whereas the participants using these in the post-Workshop course outlines having come newly to the use of learning outcomes, were less proficient in writing them. As such, the percentage of quality learning outcomes (according to the criteria of being assessable, concise, learning centred, etc.) was somewhat lower in the case of the post-Workshop course outlines.

The use of feedback strategies went up from 9 in pre-workshop course outlines to 19 in post workshop course outlines. This is especially interesting to note, as feedback though reasonably well grounded in Analysis 1 was modelled far more extensively that it was explicitly “taught”. The use of balanced strategies (the use of both informing and practice strategies, and the use of strategies in and out of class) also went up from pre to post-Workshop course outlines. However, it should be kept in mind that the Instructional Strategies concept was, in general, complex to code and as suggested by a Workshop participant during a member check with me, inappropriate to code within the course outlines. The rationale for this is that a course outline is not traditionally a document that

details instructional strategies, and as such the lack, or presence, of an instructional strategy in this document is not a reliable indicator of an instructor's use of the strategy in the classroom. The change in participants' instructional strategies pre and post-Workshop would be an interesting area of future research, to explore through classroom observation.

Assessment, a well grounded code from Analysis 1, saw only a small increase in the presence of its sub-codes from pre- to post-Workshop course outlines. For example, assessment criteria were used in 8 pre-Workshop course outlines and 10 post-Workshop course outlines. It is interesting to note, that though Assessment was a well grounded code in Analysis 1 (groundedness: 49, please see Results, Table 4-3: A Priori and Emergent Main Codes - Total Coding Instances, p. 98), the network map for this code lacks depth (please see Results, Figure 4-4). Could this relative lack of attention to assessment as reflected in the analysis of Workshop artefacts account for the minimal attention to assessment in post-Workshop course outlines? Again, it is useful to keep in mind that detailed assessment criteria and guidelines are not typically part of a course outline, while some attention to the evaluation of assignments is. As such, Workshop participants might well be using this concept to a greater degree in their actual teaching, than is visible in their post-Workshop course outlines.

However, this same explanation does not hold with respect to the even distribution of assessment points over the semester (that is, on-going assessment as opposed to high-stakes assessment only once or twice in the semester). Course outlines are traditionally the appropriate place to outline the

distribution and due dates of various assignments, but there was only a minimal improvement in the assignment due date distribution over a semester between pre and post-Workshop course outlines in this analysis (Results, Table 4-12: Assessment, p. 124).

In summary, the main conclusions from this analysis are, that (i) in general, there were more coded incidences of the four main Workshop concepts: analysis of Course Content, Learning Outcomes, Instructional Strategies, and Assessment in post-Workshop course outlines than in pre-Workshop course outlines, (ii) there were more coded incidences of certain better grounded sub-codes from Analysis 1 (that is, concept mapping, cognitive learning outcomes, feedback, and all Course Outline sub-codes such as: general information, course materials, assignment and evaluation) in post-Workshop course outlines than in pre-Workshop course outlines, (iii) while course outlines may be useful to see what instructional strategies an instructor is planning to use, this is probably not a reliable indicator of what strategies an instructor actually uses in his or her classroom, and (iv) the coded instances of the assessment code increased only minimally from pre- to post-Workshop course outlines (this is the same code that lacked depth in Analysis 1).

### **5.3 Future Research**

Certain areas would be interesting to explore further, with respect to this research and the Workshop. Firstly, it would be interesting to re-engage with the concept of alignment, and consider ways to examine the alignment between the four course design elements (analysis of course content, learning outcomes,



instructional strategies, and assessment methods) in participants' course outlines (and perhaps their course materials) to see if there are changes in participants pre and post-Workshop course outlines in this regard. Secondly, it would be interesting to create networks maps for Analysis 2 codes, and compare these to the Analysis 1 network maps, with regard to the *groundedness*, *density* and *depth* of the key Workshop concepts. Thirdly, follow up interviews and classroom observations with participants would of course be valuable.

#### **5.4 General Implications and Areas of Future Research**

This research has certain general implications in the areas of (i) the evaluation of the impact of Faculty Development initiatives, and (ii) methodologies used in the evaluation of such initiatives.

With respect to evaluating the impact of Faculty Development initiatives, one implication of this research is that intensive Workshop models such as the one studied here do seem to influence instructors' course outlines (arguably evidence of instructors' preliminary theory-in-use, Sandretto, Kane, & Heath, 2002), and could be considered as one serious option for Faculty Development Centres looking for options.

However, this thesis research also suggests a relationship between the integrity of an initiative and participants later use of valued concepts, and argues that such an examination of integrity between valued Faculty Development concepts and the actual Faculty Development experience (that is, what is taught or modelled during an initiative) must be embedded within our evaluation of the

impact of Faculty Development activities. A further exploration of this relationship would be an interesting area for future research.

With respect to the use of methodologies to examine the impact of Faculty Development activities, the use of methodologies such as comparison of pre / post artefacts, document analysis, the concepts of groundedness, density, and depth, and the examination of concepts for quality versus simply presence, are all somewhat new to the literature. These have implications for evaluating faculty developers' practices and the integrity of Faculty Development initiatives, and for examining instructors' practice.

With regard to examining faculty developers practice, the concepts of groundedness, density, and depth provide concrete ways to examine what is taught in a workshop, and how, thus giving faculty developers a different view of their practice. This overt view of faculty development practice could support intentional decision-making by faculty developers about concepts they would like to include, or exclude, in their teaching. In being finer grained than others, such an approach could enable faculty developers and researchers to pinpoint areas that are strong, and those that are weak, in their teaching, modelling, or learning. Examining this overt view of one's practice using tools such as network mapping might also support theory building in the area of Faculty Development, in that such mapping could examine and analyze valued concepts in varying degrees of abstraction. Finally, the language of groundedness, density, and depth supports a multi-dimensional discussion of (in this case) workshop concepts.

With regard to Instructors' practices, these methodologies have implications for examining instructors' espoused theories and theories-in-use, and noting the changes in these over time. Another item of interest with respect to this is the nature of the course outline as an artefact. I would argue that course outlines are uniquely positioned between an instructor's beliefs / intentions (espoused theories) and her / his classroom practice (theory-in-use). It is, perhaps the point at which the espoused theories first get operationalized as a preliminary theory in use (please see chapter 1 for a discussion on this). As such, examining instructors' interviews, course outlines, and classroom teaching might provide some information about the connections between an instructor's espoused theories and their theories in use, with regard to instruction.

A combination of these methodologies could also be used to examine student learning in terms of breadth and depth of understanding. It should be kept in mind though, that such analysis is time consuming and can pose some real challenges in the context of Faculty Development. For example, many of the concepts we seek to examine are overlapping, and clarifying these concepts conceptually, and developing reliable, discrete coding rules for them is extremely time consuming, careful work.

Another more general implication suggested by the literature review is that careful thought is often not being given to congruence within Faculty Development research, that is, there is a lack of attention to the congruence between an initiative's goals, its methodology, the data collected, and the results reported. Future research examining the impact of initiatives, while rigorously

attending to such congruence, would result in a promising body of work which would help build our understanding of the impact and value of Faculty Development.

# **APPENDICES**

## **APPENDIX A: DATABASES ACCESSED & SELECTION CRITERIA FOR RESEARCH TEAM REVIEW**

Several databases, journals, and Google Scholar were accessed for this review. The data bases searched were (i) ERIC, a database containing over a million abstracts of mostly American education related documents and journal articles, (ii) CISTI (Canadian Institute for Science and Technical Information), a database that contains over 15 million articles from 17,000 different journals, and (iii) Education-Line, a mostly British database containing full text conference papers, working papers and electronic literature that support educational research, policy, and practice.

Manual and online searches were carried out on the following journals:

- Active Learning in Higher Education
- Adult Education Quarterly
- Economics Education
- Engineering Education
- Higher Education
- Higher Education Research & Development
- Higher Education Quarterly
- Innovative Higher Education
- Instructional Science
- International Journal for Academic Development
- Journal of Geography in Higher Education
- Journal of Higher Education
- Medical Educator
- Medical Teacher
- New Directions for Teaching & Learning
- Nursing Education—Mary
- Studies in Higher Education
- Research in Higher Education

- Teaching in Higher Education
- To Improve the Academy

Google scholar was searched for “grey literature” (unpublished reports and documents) that matched our inclusion criteria (outlined below). The search terms used in Google Scholar were “Faculty development” + “higher education” >1994, resulting in 2770 results. A total of 353 abstracts were reviewed.

The inclusion / exclusion criteria followed for each of the above sources for this review was:

**.Table A. 1: Inclusion / Exclusion Criteria for Research Team Review**

Include	Exclude
<ul style="list-style-type: none"> <li>- University level</li> <li>- Types of FD activities: Workshops, consultations, learning communities, and courses</li> <li>- Conceptual</li> <li>- Empirical</li> <li>- Scholarship of teaching as it applies to teaching improvement</li> <li>- Some form of evaluation</li> </ul>	<ul style="list-style-type: none"> <li>- College level</li> <li>- Types of FD activities: consultations based on teaching evaluations</li> <li>- Purely descriptive about FD activity without conceptual basis or attempt to assess effectiveness</li> <li>- Scholarship of teaching as it applies to other aspects of the professorial role.</li> </ul>

## **APPENDIX B: JOURNALS USED FOR “TOP-UP” REVIEW (2005-2007)**

Adult Education Quarterly

Higher Education

Higher Education Quarterly

Higher Education Research and Development

Instructional Science

International Journal for Academic Development

Journal of Higher Education

Medical Teacher

New Directions for Teaching and Learning

Studies in Higher Education

Teaching in Higher Education



## **APPENDIX C: ANALYSIS 2 CODEBOOK**

### **Purpose of Codebook**

The purpose of the codebook is to create a framework within which Workshop participants course outlines can be examined. Analysis 1 examined the integrity of the Workshop experience; the purpose of Analysis 2 (this analysis) is to evaluate the change in Workshop participants' pre- and post-Workshop course outlines, as related to the Workshop concepts which were confirmed by Analysis 1.

### **Document Collection**

Pre and post Workshop course outlines were collected from participants' of the Workshop during the years 2003 to 2005. Twenty-six sets of course outlines (pre and post Workshop) were analyzed; both pre- and post-Workshop course outlines were available for these professors, because they were re-designing an existing course (as opposed to designing a new course). The participants are from two different research universities, and represent a variety of disciplines.

### **Document Analysis**

#### **Document Preparation**

Each course outline (pre and post the Workshop) was analyzed in the following manner:

Course outlines were scanned, and converted to an .rtf document using the software OmniPage Pro. These .rtf documents were all assigned to a Hermeneutic Unit within the software Atlas ti version 5. The coding for these outlines is described later in this section.

### **Connecting Analysis 1 and Analysis 2, and Going Beyond ...**

As mentioned earlier, the coding was based on Workshop concepts, as confirmed by Analysis 1. Analysis 1 codes were used as a priori codes for Analysis 2. Certain Analysis 1 codes were excluded, either at the beginning of the analysis, or during the coding process (some details are provided in the following section: Comparison of Codes in Analysis 1 and Analysis 2). In a few instances, emergent sub-codes were accepted in Analysis 2. These are made clearly visible in Table C. 1: Comparing Codes from Analysis 1 and Analysis 2. Reasons for their inclusion are discussed within their respective coding discussion, later in the section.

However, towards provided a general argument for the use of emergent coding in this analysis: the Workshop facilitators do not claim that the Workshop concepts are an exhaustive set of values. Though my primary aim in this analysis is to examine changes in Workshop participants' pre- and post-Workshop course outlines with regard to valued Workshop concepts, these values came about by putting together theoretical understanding, with instructors' practice of what they try / want to do. As such, it is always of interest in such analysis, to keep an open mind to ideas an instructor is using, that are not captured by the a priori codes.

## Comparison of Codes in Analysis 1 and Analysis 2

Table C. 1: Comparing Codes from Analysis 1 and Analysis 2

<b>A. Code: Analysis of course content</b>	
Analysis 1(Figure 4-1)	Analysis 2 (Table 4-6)
Course content - course concepts relationships between concepts concept mapping (sub-codes) Modelling -	Course Content Course Content (intended) <sup>23</sup> Course Content (topic list) - Concept Map (sub-codes) - Making Rationale Explicit
<b>B. Code: Learning outcomes</b>	
Analysis 1(Figure 4-2)	Analysis 2 (Table 4-9)
Learning Outcomes Domains & Levels of learning: Cognitive (sub-codes) Affective Psychomotor - - - Modelling <i>Q. Are they assessable, comprehensive, concise, learner-centered, understandable</i>	Learning Outcomes (I) Domains & Levels of learning Cognitive (different sub-codes) Affective (sub-codes) Psychomotor (sub-codes) Skills Communication Skills Uncertain (sub-codes) - <i>Q. Are they Assessable, comprehensive, concise, learner centered, understandable</i>

<sup>23</sup> When a code is 'intended', from here on the notation (I) is used.

<b>C. Code: Instructional strategies</b>	
Analysis 1(Figure 4-3)	Analysis 2 (Table 4-10)
<p>Instructional Strategies</p> <p>Feedback (sub-codes) in and out-of-class learning (sub-codes)</p> <p>Informing (sub-codes)</p> <p>Practice (sub-codes)</p> <p>-</p> <p>Types</p> <p>Presentation</p> <p>Student engagement</p> <p>Balance</p> <p>Modelling</p> <p>M - Making design / rationale / planning explicit (sub-codes)</p> <p>M – (sub-codes)<sup>24</sup></p>	<p>Instructional Strategies (I)</p> <p>Feedback</p> <p>In – class strategies</p> <p>Out-of-class strategies</p> <p>Informing (sub-codes)</p> <p>Practice (sub-codes)</p> <p>Other (sub-codes)</p> <p>-</p> <p>-</p> <p>-</p> <p><i>Some related information available in results</i></p> <p>-</p> <p>Making Rationale explicit<sup>25</sup></p> <p>-</p>

<b>D. Code: Assessment methods</b>	
Analysis 1 (Figure 4-4)	Analysis 2 (Table 4-11)
<p>Assessment</p> <p>Alternative, Informal, Formal, Formative, Summative, Traditional</p> <p>Techniques</p> <p>Provide feedback</p> <p>Explicit criteria</p> <p>Options to students</p> <p>Balance</p>	<p>Assessment (I)</p> <p>-</p> <p>-</p> <p><i>(overlaps with feedback – instructional strategies)</i></p> <p>Criteria (sub-codes)</p> <p>Options</p> <p><i>(Some Information available in the unprocessed results)</i></p>

<sup>24</sup> A further discussion of these follow this discussion.

<sup>25</sup> Shows up as a sub-code to different main codes

Distribution	Distribution (sub-codes)
Varied methods	<i>(Some Information available in the unprocessed results)</i>
Weighting	<i>(Some Information available in the unprocessed results)</i>
Doable	-
Complete	-
Purpose	-
Key issues	-
Examples	-
Modelling (sub-codes)	-

<b>E. Code: Alignment</b>	
Analysis 1 (Figure 4-5)	Analysis 2 - <u>Not Coded</u>
Alignment CC-IS, CC-LO, Contexts/Students-IS (sub-codes), Contexts/Students-LO, IS-Assess (sub-codes), Learning-Assess (sub-codes), Learning-IS (sub-codes)	

<b>Emergent Codes:</b>	
<b>F. Code: Course outline elements</b>	
Analysis 1 (Figure 4-6)	Analysis 2 (Table 4-5, Table 4-7, Table 4-11)
Course outline General information Course content (sub-codes) <sup>26</sup>  Course material (sub-codes) Assignments and evaluations Early information	General Information (sub-codes) <i>(Codes related to this section can be found under 'analysis of course content' at the beginning of this Table).</i>  Course materials (different sub-codes) Assignments General information

<sup>26</sup> For a more complete listing, and further discussion of these, please see Appendix 4.1: Excluded Analysis 1 codes – discussion.

Assignments Description of Evaluation Scoring criteria Clarity of percentage Consequences of delay - - Learning outcomes  Instructional methods	Details Name & Mark <i>(listed under Assessment 'criteria')</i> Name & Mark <i>(duplicate listing)</i> General Information <i>(duplicate listing)</i> Making Rationale Explicit Structure <i>(see learning outcomes earlier in the Table)</i>  <i>(see instructional strategies earlier in the Table)</i>
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<b>G. Code: Context/ Resources</b> Analysis 1 -	Analysis 2 <u>(Not-Coded)</u>
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The Analysis 1 codes excluded from Analysis 2 are listed below, with a short rationale for their exclusion. It was often the case that (a) the codes used for an explanation of a course design concept could not be judged by a lay person; for example, a Workshop facilitator might highlight the importance of including all overarching course concepts in the course content section to a course instructor. However the actual inclusion, or lack, of these concepts cannot be judged by me without further discussion with the instructor. Therefore this was replaced by the presence of a topic listing in Analysis 2; (b) the codes used for an explanation of a course design concept did not perfectly fit the implementation of this concept in a course outline, especially without further discussion with the instructor. One example is the sub-code 'Modelling'; this code was used to indicate the Workshop facilitators modelling of certain course design elements.

An open mind was kept to see if modelled concepts were introduced to a greater degree in post-Workshop course outlines. However, the code 'modelling' was not used in Analysis 2.

### **Excluded Codes**

#### **Course Content:**

- Modelling

(Discussed above)

- CC: (Course concepts)
- CC: (Relationship between concepts)

I cannot judge the comprehensiveness of these types of information in each course outline, but I can judge presence. Therefore course content, topic list, and concept map were coded for presence or absence in Analysis 2.

#### **Learning Outcomes:**

- Objectives
- Cognitive development

Cognitive development was discussed in Workshop artefacts, within the context of cognitive learning outcomes. Such codes could not be expected to appear in Workshop participants' course outlines, unless perhaps they dealt with education courses.

- Modelling

(Discussed previously)

**Criteria for Evaluating Learning Outcomes:**

- Understandable

It is difficult for a lay person to decide whether a learning outcome is understandable to students in the discipline.

**Instructional Strategies:**

- Types
- Presentation
- Student engagement

Each of the three Analysis 1 sub-codes above were a good fit for discussing instructional strategies and their value, within the Workshop artefacts. However in the context of Workshop participants' use of instructional strategies in their course outlines, such codes lack meaning and value.

- Balance

This code refers to a balance between informing and practice instructional strategies (for a fuller discussion of these strategies please refer to the Instructional Strategies section of this Codebook (p. 175). This could have been a secondary analysis, looking at the balance between informing and practice codes from Analysis 2. However, the coding of instructional strategies within a course outline is accepted as problematic: firstly, there is often a level of inference involved in this, unless the coding is followed up with a short discussion



with the instructor. Secondly, during the coding process it was agreed that a course outline is not the natural home for detailing instructional strategies; that is, the non-inclusion of certain instructional strategies in a course outline do not necessarily indicate the non-use of these strategies in a classroom.

As such, though it is theoretically possible to go ahead with a secondary analysis of the presence of balanced instructional strategies in a course outline, this would be inappropriate, and probably misleading.

- Modelling

(Discussed previously)

- Modelling - Making design explicit (sub-codes)

Does the author explicitly discuss the course design, as related to his/her learning outcomes, instructional strategies, and assessment methods?

This code was included in Analysis 2 initially, and then excluded as nothing was coded within it. Course instructors were more likely to explain their rationale for doing something (make their rationale explicit), than simply outline the design of a course. Considered in the context of coding a course outline this makes sense.

In addition, this code has a level of inference which would be difficult to defend without further conversations with an instructor.

- Modelling - Making planning explicit (sub-codes)

Does the author make his or her planning explicit, with regard to preparation required, readings and schedules for the course?

This code was modelled by Workshop facilitators, and as previously explained none of the modelling codes have been included in Analysis 2. In addition, this code is too high inference in the context of the course outlines, to code without discussion with the instructor.

- Modelling – Feedback (sub-codes)

Modelling codes not included in Analysis 2 as previously mentioned. However the sub-code 'feedback' is included in Analysis 2, under the main code 'Instructional Strategies'.

- Modelling – Resources (sub-codes)

(Modelling codes not included in Analysis 2 as previously discussed.)

- Modelling – the use of tools & activities

(Modelling codes not included in Analysis 2 as previously discussed.)

- Modelling – Microteaching

(Modelling codes not included in Analysis 2 as previously discussed.)

- Modelling – the use of Readings

(Modelling codes not included in Analysis 2 as previously discussed.)

- Modelling – Next day's preparation

(Modelling codes not included in Analysis 2 as previously discussed.)

**Assessment Methods:**

- Alternative
- Formal
- Formative
- Informal
- Summative
- Traditional

I decided not to code the 'types' of assessment categories (above) in the course outline: Other than being a time consuming process, some of these assessment types are overlapping, without firm and clear boundaries, and as such would be difficult to code as one or the other (for example, how would one differentiate between summative and traditional assessment?)

- Techniques

This code is appropriate in the context of the Workshop artefacts, though less so in the context of the course outlines.

- Balance

Is the formative and summative assessment balanced? To explore this question Analysis 2 requires a small secondary analysis, of the codes formative and summative assessment – these codes were not used, as mentioned above, though this information is accessible through the results collected. However formative assessment might or might not show up explicitly in a course outline;

moreover, it could show up under different garbs – formative assessment, feedback on drafts, instructional strategies, etc.

- Doable

Is the assessment doable in terms of workload, etc., for the instructor? I did not think that I would be able to judge this consistently and therefore left this out.

- Varied methods

This would have been a secondary analysis, based on the various assessment methods coded. This information could be pulled from the results, if it is of interest.

- Weighting

This would have been a secondary analysis, based on the various assessment methods coded. This information could be pulled from the results, if it is of interest.

- Complete

- Purpose

This code speaks to clarity of purpose with regard to assessment, on the part of an instructor. This might have coincided with a code: Assessment – making rationale explicit. However, this type of information was not encountered in the course outlines.

- Key issues

This code, though appropriate in the context of the Workshop, would not make sense while coding participant course outlines.

- Examples

This code, though appropriate in the context of the Workshop, would not make sense while coding participant course outlines.

- Modelling (sub-codes)

Modelling codes not included in Analysis 2 as previously discussed.

### **Alignment**

This would have been a secondary analysis, based on the alignment of various coded concepts, but as not coded due to the complexity of the code

### **Course Outline Elements:**

- Course material
- Texts
- Other requisites

Both these categories were included under two codes in Analysis 2: course materials and course materials: general information.

### **5.4.1 Overview of Analysis 2 Codes, Organization of this Section, and Some General Information**

The overview of the main codes used for this analysis (Analysis 2) is as follows:

- General Information
- Course Materials
- Course Content
- Learning Outcomes
- Instructional Strategies
- Assignments and Assessment
- Alignment

The document analysis section that follows, organizes these codes into the following sub-sections:

- i. Coding the basic elements of the Course Outline
  - General Information (code)
  - Course Materials (code)
- ii. Coding the Course Content (code)
- iii. Coding the Learning Outcomes (code)
- iv. Coding the Course Outline as a whole
  - Instructional Strategies (code)
  - Assignments and Assessment (code)
- v. Codes under questions:
  - Alignment (code)

In the sections detailing these codes, I have discussed the information I am seeking through my coding and analysis, provided examples<sup>27</sup> for the code, a list of the sub-codes, and a description of the coding for these sub-codes.

#### 5.4.2 Groundedness

A term used often in the following section is: groundedness. Atlas ti, the software used for both analyses, allows a researcher to upload all his/her data into a

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<sup>27</sup> These examples are either direct quotes from the Workshop binder explaining what the code should be (modified minimally to be meaningful in this context), or direct quotes from course outlines I coded.

Hermeneutic Unit (HU). This data can be uploaded as one, or many, documents (called primary documents). Atlas ti provides certain tools for analysis, the idea of groundedness being one such. Groundedness refers to the number of times a code appears in an HU. However, a researcher can filter an HU to see the groundedness of a code within one or more specified primary documents. For the purpose of this research, all the course outlines together made up one (master) Hermeneutic unit (HU). Each course outlines (pre or post) was uploaded as a single primary document.

### **5.4.3 I. Coding the Basic Elements of the Course Outline**

Each course outline (pre and post) is examined to see if it includes two basic elements of a course outline: General Information, and Course Materials. These, and other, codes are derived from the Workshop key concepts, and their integrity within the Workshop experience confirmed by Analysis 1.

#### **5.4.3.1 General Information**

##### **Rationale for the Coding and Representation**

The groundedness (the number of times the code appears in a course outline) for this code provides information about how often general information was included in the course outline before and after the Workshop. It would seem that the more specific an outline, the better. On putting together examples (from the Workshop binder, as well as from coding the course outlines) of what could be included in General Information, the following 16 discrete items are of value within this section. Beyond this, an instructor *might* be providing too much information. This is not, of course, an exhaustive list; on the flip side, it is also possible that each of these items is not always required.

##### **Examples**

- Number and title of course
- Semester / University/ Department
- Number of credits
- Name and title of the instructor, contact information

- Instructor office hours
- TA information: contact
  - TA office hours
- Day, place and time of regular classes
- Prerequisites—particular courses, specific knowledge or skills a student should know before beginning the course (e.g., use of computer, ability to read architectural plans, etc.)
- Calendar course description (only if explicitly stated as a calendar course description)
- General academic policies
  - Disability policy and resources; Academic Integrity, plagiarism, human rights
  - Exception: instructor comments on how (s)he will deal with student plagiarism in her course is coded within the Assessment code (see Assessment section for more details)
- Attendance rules etc.
- Email interactions
- Format: lecture/lab/*WebCT*
  - Note: DO NOT consider formats to be instructional strategies unless it is clear that the instructor is speaking about both, an instructional strategy and a format
- Making expectations explicit: “students are expected to ...,” etc.
- Websites and online information: General information about the course website, web space, etc
  - Exception: online supplementary readings, course related readings, are coded under course materials. See this section for further information.
- Course Schedules

### **Sub-Codes**

- i. Code: General Information



Code: General Information (I)

- ii. Code: Course Schedule

Code: Course Schedule (I)

### **Coding**

#### **Unit of Analysis**

One complete item (as described in examples above) is coded as one UoA, along with any related information.

**Note:** The detail provided above is important, as it is easy to disagree with what is one item. In some instances, items were shifted to occur together, so that they were always coded as one unit. In other cases, items that seemed related, but regularly occurred in different parts of the course outline were coded as two units.

### **Coding**

- i. General Information: coded as per examples outlined above, except for course schedule (see below).

General Information (I): points to the intent to give general information, even though the information has not been provided. For example, TA office hours: TBA, would be coded under this code.

- ii. Course Schedule: any course schedule.<sup>28</sup>

Course Schedule (I): the intent to provide a course schedule.

General Exception:

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<sup>28</sup> A course schedule also lends itself to the coding of instructional strategies, assessment distribution, course content (topic lists) etc. These items, their prevalence within the course schedule, and associated coding rules, are discussed in detail within their respective sections. A clear reasoning and rationale of what should, and should not, be dual coded within a course schedule, is available within the coding software, Atlas, along with the coding definitions.

- Headers and footers containing any of the above information have been excluded from this coding.
- Websites, LMS, online readings:
  - Supplementary readings, LMS, the course website, and information about using them will be coded as Course Materials / Course Materials: General Information (see relevant section for details).

#### **5.4.3.2 Course Materials**

##### **Rationale for the Coding and Representation**

1. The coding of course materials is of interest to us to the extent that it is an essential item on a course outlines, as per Analysis 1, and I would like to know whether or not this appeared on each course outline. The groundedness of the code informs us about whether or not this code is present, and if so, how many times it occurs.
2. It would seem that the information on groundedness of course materials (i.e., how often it occurred) is of no further interest to us (requirements being different for different disciplines, we cannot attach value to the number of readings a student is required to read in a course).

##### **Examples**

- Specific information about required texts, including title, author(s), edition number; additional handouts and other materials; readings which have been placed on reserve in the library should be indicated; suggested and reference texts should be listed.

Note: It should be clear what is required reading as opposed to suggested reading.

- Equipment required for the course (for example, video cassettes, specific types of calculators, etc.)
- Course learning management systems, Course websites, etc.
- General information about where texts and resources can be purchased or borrowed.

### **Codes**

- i. Code: Course Materials  
Code: Course Materials (I)
- ii. Code: Course Materials: General Info

### **Coding**

#### **Unit of Analysis**

The unit of analysis for course materials is:

- One item (one book, LMS, website, course pack, reading, each is coded as one unit); there is a contradiction in that one course pack is made up of many readings. However, in a few instances single readings were provided throughout the course outlines, and had to be coded as separate units of analysis.
- Information about availability, suggestions about getting materials, etc.: each complete thought within these items is coded as a separate unit.

### **Coding**

Course Materials are coded in Atlas as:

- i. Course Materials: coded as per the examples outlined above, except for General information (see below);

Course Materials (I): points to the intent to give certain information, even though the information has not been provided. For example,

“Supplementary readings: TBA,” would be coded under this code.<sup>29</sup>

- ii. Course Materials: General Information: General information about the course materials is coded as such, that is where it can be bought, if it is available in the library, etc.

## **5.4.4 II. Coding of Course Content**

### **5.4.4.1 Rationale for Coding and Representation**

We are interested in seeing the clarity with which the course content is articulated, and whether the underlying concepts, and their relationship to the course as a whole, are clarified. The course content, the concept map, and the providing of a rationale for the course content, all lend themselves to such clarity for students, when beginning a course. (Concept mapping is coded separately as it is conceived as a useful tool for making explicit relationships among course concepts, for students (McAlpine and Emrick, 2003)). In each case (i.e., course content, concept maps, and rationale), we want to see whether such items have been provided or not, but are not particularly interested in how often these items have been provided. The focus is more on presence, and quality of what's present, and not on quantity.

### **5.4.4.2 Examples:**

- A concept map or graphic representation of the content of the course
- A description or/and sequence of the topics to be addressed in the course

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<sup>29</sup> **NOTE:** Required readings, coded as course materials, are also automatically coded as “IS: Informing”/ “IS: Out-of-class,” every time, as these are assumed to fit an “out of class, informing instructional strategy.” This is discussed in greater detail in the section on Instructional strategies. A line of reasoning is provided within Atlas, under the code definitions, to help with this coding.

- The rationale for the sequence of the course, especially if one is not using an assigned text in chapter sequence (e.g., an historical approach with topics arranged chronologically, a progression from simple to more complex procedures or concepts, or a series of theoretical principles followed by applications);
  - What the course is not about or what topics will not be covered.
  - Course themes, goals, objectives (what the course hopes to do)
- Exception:** A very short course content description explicitly called “Calendar description” is coded as General Information, not as course content.

#### 5.4.4.3 Codes:

- i. Code: Course Content  
Code: Course Content (topic list)  
Code: Course Content (I)
- ii. Code: CC Concept Map  
Code: CC Concept Map (I)
- iii. Code: CC MRE

#### 5.4.4.4 Coding:

##### Unit of Analysis

The unit of analysis for course content is as follows:

- Course content: the complete course description or content provided in any one unbroken section.
- Making Rationale Explicit: the complete rationale provided in any one unbroken section.
- A Concept map: one concept map

## **Coding**

- i. Course Content: is coded at three levels:

Course Content: a well developed description of the course content.

(Note: sometimes, the instructor's outlined course objectives are actually learning outcomes, misnamed. In this case, the items are coded as learning outcomes)

Course Content (topic list): a simple listing of the course topics. (This is sometimes, infrequently, coded within a course schedule—weekly topics to be covered. In some course outlines, this was the only evidence of course content, hence this was thought useful). Examples of the coding of these two levels of course content are available upon request.

Course Content (I): points to intent to give certain information, even though that information has not yet been provided. For example, a heading such as "Course Content: TBA," would be coded under this code.

- ii. CC Concept Map: the presence of a concept map

CC Concept Map (I): the intent to provide a concept map.

- iii. CC MRE: making the rationale for the course content, or the organization of the course content, explicit – this is often in the form of the instructor saying "I am doing this because...." For a quote to be coded as such, this intent should be explicit and obvious.

### **5.4.5 III. Coding of Learning Outcomes**

#### **Rationale for Coding and Representation**

My interest in coding learning outcomes is to see if (a) learning outcomes have been included in the course outline before and after the workshop, (b) if so, are

they clearly written, easy to understand, and learning focused. That is, we are simply interested in if learning outcomes are used in each course outline, and if they are, what is their quality.

Though learning outcomes are finely coded, to capture change in domains and levels from one course outline to the other, we don't really question closely this change; we believe that the instructor is the best judge of the learning outcomes for her course. Subsequent to coding, a set of questions is asked of each outcome, with regard to clarity, etc. to respond to the question of the quality of each learning outcomes.

### **Examples**

- Clear statements of the knowledge, competencies or skills you expect students to have acquired by the end of the course (e.g., "By the end of this course students should be able to synthesize information from..." or "make predictions" or "solve problems" etc.).

### **Codes**

#### **i. Cognitive Learning Outcomes**

Code: LO: C – Knowing

Code: LO: C – Understanding

Code: LO: C—Thinking

#### **ii. Affective Learning Outcomes**

Code: LO: A – Attention

Code: LO: A – Respond

Code: LO: A – Value

Code: LO: A – Judging

Code: LO: A – Adhere

iii. **Psychomotor Learning Outcomes**

Code: LO: P—Perception

Code: LO: P—Set

Code: LO: P – Guided Response

Code: LO: P – Mechanism

Code: LO: P—COR

Code: LO: P—Adaptation

Code: LO: P—Origination

iv. Code: LO: Skills

Code: LO: Communication Skills

v. Code: LO: (I)

Code: LO: Uncertain

Code: LO: Uncertain (LOE)

vi. Code: LO: MRE

**Coding**

**Unit of Analysis**

The unit of analysis is one learning outcome.

**Coding**

Learning outcomes are coded in Atlas ti as to the domain of learning (the nature of the learning task), and its level. For this analysis, I use three a priori codes for domains of learning: cognitive, affective, and psychomotor. These domains are based on works by LaSere (cognitive domain), Krathwohl's (1969) Taxonomy of



Educational Objectives (Affective domain), and the Board of Education for the City of Etobicoke (1987, Making the Grade) (Psychomotor domain).

The cognitive domain is coded at three levels: Knowing / Understanding / Thinking

The affective domain is coded at five levels: Attention / Respond / Value / Judge / Adhere

The psychomotor domain is coded at seven levels: Perception / Set / Guided Response / Mechanism / COR / Adaptation / Origination.

The following emergent codes were also coded within learning outcomes: LO: skills and LO: uncertain.

Details of these domains and levels, and their subsequent coding, are as follows:

### ***Cognitive Domain***

The cognitive domain includes objectives that are related to information and knowledge (Kemp, 70). LaSere divides the cognitive domain into three major categories (from least demanding to most demanding):

#### **a. Knowing**

"If students are to think and to organize their thoughts, they need something to think about and to think with. Much of what goes into Freshman courses has the instructor presenting and explaining course content in the interest of providing food for thought or tools for thinking." (LaSere, 66).

There is no constant alignment between verb choice and level. The following list of verbs may be representative of “knowing,” but the decision regarding level of learning can only be made within the context of the outcome as a whole.

Define	Label	List	Memorize
Relate	Distinguish	Identify	Recognize
Recall			

Examples

“Identify the various alternatives and repetitive execution techniques and the situation factors under which each would be implemented.” (Emrick, Business Systems Design I)

“Distinguish strategic decision-making modes: thinking first, doing first, and seeing first.” (Jorgensen, Competitive Strategy)

**b. Understanding**

“When a student understands, they can see the relationships between specific instances and more general ideas. If we ask them to think of examples that illustrate concepts or principles, they can do so. Conversely, when we pose specific situations or examples, students can explain how they relate to broader ideas” (LaSere, 68).

There is no constant alignment between verb choice and level. The following list of verbs may be representative of “understanding,” BUT the decision regarding level of learning can only be made within the context of the outcome as a whole.

Classify	Explain	Identify	Interpret
Review	Report	Illustrate	Restate
Organize	Estimate	Apply	Demonstrate

Examples:

“Identify the values underlying a given management behaviour.” (Jaeger, Cross Cultural Management)

“Apply general principles of effective Job Design, Staffing, Training and Development, Performance Evaluation, Reward Systems, and Labour Relations to specific challenges in a ‘real’ work unit.” (Gagnon, Managing Human Resources)

### c. Thinking

“It is one thing to be able to define a concept or to summarize a school of thought, another thing to recognize how these ideas look in specific situations, and yet another to use what one has learned to solve problems, explain causes and effects, draw conclusions, make recommendations, critique arguments, and a host of other things we ask students to do. These tasks require transforming, combining, creating something beyond what currently exists” (LaSere, 70).

There is no constant alignment between verb choice and level. The following list of verbs may be representative of “thinking,” BUT the decision regarding level of learning can only be made within the context of the outcome as a whole.

Analyze	Criticize	Contrast	Evaluate
Propose	Solve	Synthesize	Categorize

Appraise	Assess	Judge	Justify
Argue	Formulate	Originate	Produce
Deduce	Compare	Contrast	Develop

Examples:

“Assess managers’ incentives for information disclosure in general cases.”

(Fortin, Accounting Theory)

“Analyze the uncertainties of risk factors in managerial decision-making situations.” (Zabowski, Statistics I)

***Affective Domain***<sup>30</sup>

The affective domain involves objectives concerning attitudes, appreciations, values and emotions. It is divided into five major areas, listed as least demanding to most demanding. Verbs that may be representative of each level are provided below.

a. **Give Attention:** Willing to give attention to an event or activity

Listen	Perceive	Tolerate	Appreciate
--------	----------	----------	------------

b. **Respond:** Willing to react to an event through some form of participation

Answer	Follow	Obey	React
--------	--------	------	-------

c. **Value:** Willing to accept or reject an event through the expression of a positive or negative attitude.

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<sup>30</sup> Krathwohl (1969) Taxonomy of Educational Objectives

Support	Oppose	Approve	Criticize	Nurture
---------	--------	---------	-----------	---------

d. **Judge:** When encountering situations to which more than one value applies, willingly organize values, determine relationships among values, and accept some values as dominant over others.

Evaluate	Prioritize	Assess	Weigh	Compare	Test
----------	------------	--------	-------	---------	------

e. **Adhere:** Learner consistently acts in accordance with accepted values and incorporates this behaviour as a part of his or her personality.

Practice	Internalize	Acculturate	Commit	Bind	Conform
----------	-------------	-------------	--------	------	---------

Examples:

“Appreciate the importance of human resources policies and practices to employees, to organizational success, to healthy communities and a sustainable world.” (Gagnon, Managing Human Resources)

“Value a culturally sensitive approach to management.” (Jaeger, Cross Cultural Management)

***Psychomotor domain***<sup>31</sup>

a. **Perception:** Using the senses to obtain cues to guide motor activities

<b>Detect</b>	<b>Differentiate</b>	<b>Distinguish</b>	<b>Identify</b>	<b>Listen</b>
Observe	Smell	Isolate	Taste	Feel
Touch				

<sup>31</sup> Source: Board of Education for the City of Etobicoke. (1987). *Making the Grade* (p. 32). Scarborough, ON: Prentice Hall.

b. **Set:** Being ready (mentally, physically, emotionally) to take a particular type of action.

Proceed	React	Respond	Volunteer	Show readiness
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c. **Guided Response:** Learning motor skills through imitation and trial and error

Repair	Construct	Dismantle	Keyboard	Assemble
Dissect	Throw	Measure	Sketch	Display
Type	print			

d. **Mechanism:** Performing motor skills consistently with some confidence and proficiency.

(Same list as for “Guided Response” but at a higher level of proficiency, consistency, and confidence).

e. **Complex Overt Response:** Performing accurately, automatically, efficiently and without hesitation, motor skills which involve increasingly complex movement patterns.

(Same as list for “Mechanism” but at an even higher level of proficiency, consistency and confidence).

f. **Adaptation:** Modifying particular motor skills or movement patterns to meet a new or unexpected situation.

Adapt	Modify	Change	Alter	Rearrange
Revise	Vary			

g. **Origination:** Creating a new skill or movement pattern to meet a new or unexpected situation.

Originate	Create	Devise	Compose	Construct
Design	Arrange	combine		

***Emergent Codes***

- i. **SKILLS:** In a few instances instructors had learning outcomes that referred to certain skills, primarily to communication or writing skills (grammar, structurally effective writing). These learning outcomes do not seem to fit any of the other domains, and were coded under an emergent learning outcome “skills”

**Example**

- i. You will be able to compose grammatically correct and structurally effective written assignments.
- ii. The student will demonstrate adequate communication skills required for taking a history, assessing, and treating clients and interacting with colleagues.
- ii. LO: (I): point to an explicit intent to include a learning outcome (for example “learning outcomes: to be added,” or a blank section on learning outcomes, etc.), even though the item has not been included
- iii. “LO: Uncertain”: This code is used in the following circumstances: the learning outcome does not use the any of the verbs required to be classified in a domain; the terms used, and the objective being sought after, are too general or not specific enough; it is difficult to judge between two levels /

domains of learning outcomes; the wording of the learning outcome makes it difficult to code it at all.

LO: Uncertain (LOE): Coded in instances when the uncertainty in coding a learning outcome seems due to my lack of content expertise.

### Note

- It should be kept in mind that my coding of the learning outcomes is based on lay knowledge
- In the Workshop binder (from Analysis 1) course goals or objectives were included as learning outcomes. They seem to better fit the “course content” section, in that they often discuss what the course hopes to do / cover, rather than what students will be *able to do*. The difference is often quite subtle. For example, here are two course objectives, picked at random:
  - Provides programmers with an introduction and in depth knowledge of an advanced language (C++), and how to apply it and object-oriented concepts to applications design and implementation.
  - Once you have successfully completed this course, you will have acquired: object-oriented design and programming skills using C+<sup>+</sup>;Such course objectives are usually very interwoven with the course content, and coded within course content. *However*, in some instances a participant has labelled a learning outcome as a course objective; i.e., (s)he is obviously referring to the student learning outcomes at the end of the course. In such instances, the item was coded as a learning outcome.



In most instances, I have coded an item as a learning outcome when it is clearly separate from the course content, and labelled as a learning outcome

#### **Do LO meet criteria?**

Subsequent to coding, each learning outcomes was judged to be assessable, concise, learning-centred, and clear, based on the following criteria. These categories, as well as the criteria below, are adapted from the Workshop binder. The following questions were asked of each learning outcomes; the information was input into a Worksheet: Learning Outcomes (Master).

- i. Assessable: is it possible to assess the learning outcome in some way?  
(y/n)
  - ii. Concise: the learning outcome uses no more words than necessary.<sup>32</sup> (y/n)
  - iii. Learner Centered [y(es)/n(o)/s(omewhat)]. I asked the questions – is this learning outcome:
    - Stated from the perspective of the learner?
    - Easily understood by potential learners? -- (can't judge)
    - Shift perspective from teaching to learning
    - focuses on learning (concept map)
- Both 'yes' and 'somewhat' were counted as yes.
- iv. Clarity of writing (y/n): was the writing clear and easy to understand? (y/n)

#### **IV. Coding the Course Outline as a Whole**

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<sup>32</sup> Examples of concise v/s wordy learning outcomes are available in a document - Coding Examples (available upon request) to give the reader further clarity about instances when this decision was made.

The next set of codes is based on concepts that are embedded and woven throughout the course outline. Items in this category are:

- i. Instructional strategies,
- ii. Assignments & Assessment,
- iii. Alignment.

#### **5.4.5.1 Instructional Strategies**

##### *Rationale for Coding and Representations*

This code is an a priori code based on Analysis 1. The Workshop binder suggests criteria for making decisions about instructional strategies, to instructors:

- i. Are you balance informing and providing opportunities for successful practice in and out of class?
- ii. Are they aligned with outcomes? That is, do they support and provide practice in achieving the outcomes?
- iii. Are they helping students to understand the concepts and relationships on your map?
- iv. Have you ensured the best distribution of “informing” between in-class and out-of class activities?
- v. Are there opportunities for feedback from peers and you?
- vi. Are they better/best choices given the context and resources?
- vii. Does the distribution of time accurately reflect i) the relative importance of the outcomes of the course, and ii) the percentage you will be assigning to the outcome in the final grade

Not all of these criteria are easily code-able in a course outline. I made a decision to examine the following items for change pre and post the Workshop:

- (i) were instructors using both informing and practice strategies in their course outlines?
- (ii) Were they distributing these strategies both in and out of class?
- (iii) Were they incorporating opportunities for feedback in to the course?

The groundedness of informing and practice strategies would allow us to judge the presence of these strategies in a course outline; the co-occurrence of each of these strategies with a code “occurring in / out of class” would allow us to judge whether both practice and informing strategies occurred in and out of class.<sup>33</sup> The groundedness for the use of feedback in a course outlines would allow us to judge the presence of this strategy. In this instant, we are not particularly interested in how often feedback was used,<sup>34</sup> but in the fact that it was used.

An important note here is that coding instructional strategies within a course outline gives a one-dimensional view of a course. We do not know much about the instructor’s actual classroom practice.

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<sup>33</sup> The numbers for groundedness here are interesting in that they provide ways to measure balance between informing and practice. However, to do this without paying close attention to the context of each course outlines content and learning outcomes would be a mistake; that is, the meaning of balance between informing and practice might well be specific to the discipline and course. Hence this comparison is not attempted.

<sup>34</sup> Using feedback more often might suggest a more thoughtful approach. However, formative feedback cannot really be judged from a course outline, unless explicit. Then, we are left with feedback used for assignments, the number for which would be dependent on the assignment per course.

## Examples

- A Brief description of the instructional approaches that will be used during the course (e.g., lectures, seminars, laboratory or clinical activities, group projects, etc.).
- Informing strategies such as readings, lectures, etc.
- Explicitly mentioned feedback, practice, and other strategies (group work, debates, etc.).

**Note:** Due to the varied nature of each instructional strategy, specific examples are provided within each strategy's coding descriptions.

## Codes

- i. Code: IS: Informing  
Code: IS: Informing (I)
- ii. Code: IS: Practice  
Code: IS: Practice (I)
- iii. Code: IS: Other  
Code: IS: Other (I)
- iv. Code: IS: Feedback  
Code: IS: Feedback (I)
- v. Code: IS: In Class  
Code: IS: In Class (I)
- vi. Code: IS: Out of Class  
Code: IS: Out of Class (I)
- vii. Code: IS: (I)
- viii. Code: IS: MRE

**Coding:**

As mentioned earlier, this is a complex concept to code for many reasons. A few such reasons previously mentioned are: (i) course outlines are not the natural vehicle for instructional strategies; (ii) without interviewing each instructor, coding instructional strategies tends towards higher levels of inferences than other codes; (iii) these strategies are often implicit in an instructor's thinking, and occur throughout the course outline, embedded within various sections of the course outline – this lends itself to repetitive coding, and requires careful thought about when and where such strategies should be coded.

In trying to negotiate the challenges this creates (repetitive coding, changing units of analysis, etc.) I have:

- i. closely followed the rule that instructional strategies are only coded when explicit; that is, coding is very low inference, and
- ii. set out clear (though somewhat complex) criteria as to when and where instructional strategies should be coded.

**Unit of Analysis**

Instructional strategies are often dual-coded with another main code. When this is the case (for e.g., course materials, course schedule, etc.) the strategy takes on the unit of analysis of the parent code. In instances when it is coded alone, the unit of analysis is one strategy.

However, this lends itself to a corruption of the data: for example three strategies of one type might be mentioned within a course schedule, but would only get coded once. I have taken some effort to overcome this in my data

representation; this will be discussed in greater detail in the section: Entering information into the data table.

### **Coding**

Instructional strategies are coded at two levels, simultaneously:

1. The type of instructional strategy (informing, practice, other, feedback)
2. Where the strategy occurs (in / out-of-class)

These levels are hierarchical, in the sense that a quote must first be coded as an instructional strategy, before it can be coded as an in/out-of-class strategy.

- IS: Informing:

#### **Examples of the IS: Informing code:**

- Readings
- Lectures
- Websites
- Guest lecture
- Guest presentations

The above are coded where ever they show up. Readings and websites are always dual-coded with course materials.

IS: Informing (I): The intent to code the above. For example: guest speaker

- TBA, develop instructor presentation notes, etc.

- Code: IS: Practice

The Workshop binder notes that “providing structured activities with feedback, with structure and feedback reduced over time” qualifies as practice. However, this is difficult to code within a course outline. For the purpose of this codebook, practice is coded only when an instructor

explicitly points to something as an opportunity for students to practice their learning.

### **Examples**

- Microteaching: teaching practice;
- Objective of lesson: to practice teaching plan;
- Planned exercises to reinforce concepts taught in class.

#### Code: IS: Practice (I)

The “IS: Practice (I)” code points to intent to give certain information, even though that information has not yet been provided. For example, the statement “create exercises that build skills for final project,” would be coded here.

- Code: IS: Feedback
  - (i) Feedback is only coded when explicitly stated.
  - (ii) Feedback can sometimes be judged from a schedule. (For example, a post-assignment review would be coded as feedback.
  - (iii) High stakes assignments might incorporate an element of feedback (for example: hand in your drafts for feedback).
  - (iv) Feedback is only labelled in/out of class, if explicit stated. Otherwise, it is not coded at this second level.

### **Examples**

- (i) Drafts of papers explicitly providing feedback, or “formative assessment”
- (ii) Explicitly mentioned feedback for an assignment, either peer, instructor, automated, or sometimes even self feedback with criteria.
- (iii) post-examination reviews

*Codes with which it usually co-occurs*

- . Assignment: Name&Mark
- . Assignment: Details
- . Course Schedule

Code: IS: Feedback (I)

The “IS: Feedback (I)” code points to intent to provide feedback, even though that information has not yet been provided. For example, the statement “To be added: peer review / midterm review,” would be coded under this.

- Code: IS: Other (emergent code)

Any other explicitly stated instructional strategies are coded as “IS: Other.” Examples of such strategies are provided below. This code was created to try and capture the variety of strategies instructors mentioned they would use in their course. I believe it is essential to capture these in some way, else we would not see a true picture of the code: Instructional strategies. These strategies showed up very often within course schedules, expectations for participation, etc. Further details on this are provided later in this section.

This code is only used for strategies other than those outlined in an assignments<sup>35</sup>; the only exception to this is strategies mentioned under the “participation mark” details, which are coded as they appear.

**Examples:**

- Discussions
- Group work
- Minute papers
- Forums
- Case based work
- Site visits
- Needs Assessment (one instance)
- Practicing end of chapter problems

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<sup>35</sup> It should be mentioned, that instructors will sometimes discuss strategies they intend to use in general. Later, it becomes evident that these strategies are embedded within an assignment. My coding has not controlled for this.



Though these could/should be considered “practice,” my coding rule demands strategies only be coded as practice when explicitly mentioned as such. Hence when not mentioned, these get coded under “other”

- Reviews before exams
- practicals
- clinics

*Codes with which “IS: Other” co-occurs:*

- . Course Schedule
- . Participation (Assignment details)

Code: IS: Other (I)

The “IS: Other (I)” code points to intent to provide certain strategies, even though that information has not yet been provided. For example, the statement “To be added: group work/ minute papers,” would be coded under this.

- Code: IS: In / Out of Class

Do the strategies occur in or out-of-class? The codes: IS: In class / out-of-class are a 2<sup>nd</sup> layer of code, in that they are never coded alone. They are coded subsequent to a quote being coded as one of the instructional strategies outlined above. This code is only used when explicit, or obvious. Certain items to note: the online environment is neither coded as in or out of class; feedback is often not coded for in/out-of-class, unless explicitly mentioned. As mentioned earlier, required readings are always coded as IS: Informing/ out-of-class.

Code: IS: In / Out of Class (I): Dual coded with an intended (I) strategy which will obviously occur in / out-of-class (for example: Guest presentation – TBA, would be dual-coded as IS: Informing (I) / in-class (I).

- Code: IS: MRE

This is coded when an instructor makes explicit the rationale for an instructional strategy. Examples of this are statements such as: the purpose

of this technique is...; students will do xxx towards documenting their learning....

- Code: IS: (I)

The “IS (I)” code indicates the intent to include certain instructional strategies, even though that information has not yet been provided. For example, the statement “Add section on instructional strategies,” would be coded under this.

**NOTE 1:** As mentioned earlier in this section, instructional strategies are coded throughout the course outline. Certain areas within which instructional strategies were coded are nuanced and need special mention and detail:

- i. Class format: it is often difficult to distinguish between a strategy and the format of a class (for example: lectures could be either the class format or the strategy). I try not to code instructional strategies under items labelled format, unless it is explicit, or obvious, that the items refer to both format and an instructional strategy. In the interest of clarity, a document outlining examples of all codes is available upon request.
- ii. Required readings are dual-coded as Informing / out of class instructional strategies; (they are also coded as course materials – for details see relevant section).
- iii. Course schedules: A course schedule is often the most probable place for an instructional strategy to show up. It lends itself closely to reflecting an instructor’s plans for daily / weekly classroom practice (for further details see the Course Schedule code under General Information). As such, most strategies that are explicitly mentioned in the course schedule are coded.

For example:

- “IS: **other**” such as

- . discussion,
- . minute papers,
- . pre-exam reviews
- “**feedback**” as in post-exam reviews
- “**informing**” strategies such as a guest lecture.

Exception: course readings are not coded as informing strategies within a course schedule; this was done to promote clarity in the data; there is an established section for course materials and readings, in most course outlines, and readings are always coded here. Coding them within a course schedule would lead to unnecessary duplication.

- iv. Assignment details are only dual coded with Instructional strategies in certain instances, and when the strategies are explicitly mentioned - strategies that do get dual coded with assignments are practice and feedback. This is appropriate, as explicitly mentioned feedback and practice are most likely to occur within assignment details (for example “I will provide you feedback within xxx days” or “4 quizzes for formative purposes”).

Though “IS: Other” also has the potential to be dual-coded with assignments, I ruled against doing this as previously mentioned; this is an emergent, somewhat higher inference, code than the others (as detailed in its section)<sup>36</sup>. I decided that IS: Other should be used only to capture ungraded strategies used through the course. The participation mark details, however, are not treated as a graded assignment. Any strategy explicitly mentioned here gets coded; the strategy that is coded very often under the participation mark is “IS: Other”; this is appropriate as instructors often

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<sup>36</sup> The line between instructional strategies and assignments is very blurred—an aware, thoughtful instructor might use assignments for formative, instructional purposes.

group strategies within the “participation” mark to emphasize their value to students.

#### **5.4.5.2 Assessment**

##### **Rationale for Coding and Representation**

The Workshop binder suggests that “The description of how learning will be evaluated provides guidelines for students to structure and pace their study and to gauge their progress. Providing explicit information early in the course about assignments and grading procedures will allay or prevent phone calls and visits from students questioning their mark after the course is finished. As well, once the course is finished, it is difficult to set up consistent standards and the result can be confusion and perceived injustice.”

Based on this we are primarily interested in two interrelated concepts: assignments and assessment in general. It is difficult to examine formative assessment within course outlines without a high level of inference. As such, this analysis focuses on assignments and a subset of general assessment: the assessment of course assignments. I will discuss these two sections separately:

1. With regard to Assignments, we’re interested in examining if instructors provided enough early detail to students about their assignments: that is, the names, percentage, and details for each assignment. At a second level, we’d also like to explore if (i) instructors clarified their rationale for assignments, and (ii) whether they provided some structure within assignments to support students as they work through them.

This analysis will focus on whether assignment names, percentages, and details, rationale and structure were present in a course outline; we don't pay too much attention to how often they occurred in a course outline. Though a comparison of the numbers of the groundedness of assignment names, marks and details would give us an indication of whether details were provided for each assignment, details for different assignments are often intertwined. As such, such a comparison is not particularly useful, and might not present an accurate picture.

2. With regard to the Assessment, we would like to know whether an instructor provided a rationale, assessment criteria, options, and used varied methods. Additionally, did (s)he distribute assessment over the semester as opposed to clumping it at the end of the term.

Again, for most of these items we simply need to assess their presence in the course outlines. However, to examine whether an instructor used varied methods, it's necessary to decide on what consists of "varied" methods; based on this we would need to evaluate a list of assignment methods used, for every course outline. Similarly, to code and represent assessment distribution, we need to code for the months students were assessed in, and based on the groundedness of these decide whether we think the assessment well distributed.

### **Assignment and Related Information**

The Assignments code, like other codes, was derived from Analysis 1. However, it was a subset of codes specific to a main code Course outlines (as opposed to

the more abstract super code: Course design principles)<sup>37</sup>; unlike Assessment, the Assignments code wasn't discussed in any great detail Workshop binder. Hence, all the sub-codes under Assignments, are emergent.

#### **Codes**

- i. Assign/Eval: General Information  
Assign/Eval: General Information (I)
- ii. Assignment: Name & Mark  
Assignment: Name & Mark (I)
- iii. Assignment: Details  
Assignment: Details (I)
- iv. Assignment: Structure  
Assignment: Structure (I)
- v. Assignment: MRE

#### **Coding & Examples**

Assignments include all graded or ungraded assignments; (for example, homework assignments are included under assignments). As examples are quite specific to each code, they are provided within the coding description for each code.

#### ***Unit of Analysis***

The unit of analysis for assignments is one complete thought.

This plays out in different ways in each of the sub-codes; for example, a complete thought for Assignment: Name and Mark is just the single line outlining

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<sup>37</sup> General information and Course materials fall into the same category.

the name and percentage of an assignment; for assignment details, it is the whole section on the detail of one assignment, and so on.

The exceptions to this rule are:

- i. When an assignment is broken into smaller assignments, the parent assignment is coded as usual, but it excludes all details related to the smaller "child" assignments; these are then coded as separate assignments, following the usual rules: name& mark, details, etc. The reason for this decision was to capture the "varied" assessment methods being used in a course. Examples of this and other coding are available upon request.
- ii. Assignment structure always co-occurs with either Assignment name & mark, Assignment details, or Course schedule. This then takes on the unit of analysis of the parent code.

### **Coding**

- i. Assign&Eval: (General Info)

#### **Examples:**

- The consequences of a delayed assignment, information about extensions, acceptable circumstances for a delay, related penalties.
- Plagiarism, discussed within the specific context and consequences for the course and its assignments.
- Information on how Assignments should be handed in.

#### **Coding**

Coded as per the examples above; might include other, similar types of information.

Assign&Eval: General Info (I)

Coded when there is an intent to include general assignment information, as discussed above, even though the actual items have not been included. For example, “add information on late assignment” would be coded here.

ii. Assignment: Name&Mark

**Examples:**

- The topic or name of each assignment, along with a clear statement of percentage each assignment or exam is worth.
- Home –work assignment are included under assignments
- Exams and mid-terms are coded as assignments.

**Coding**

Only the name and mark of an assignment are coded here. Details of assignment are coded separately, under Assignment Details.

Assignment: Name & Mark (I)

The “Assign: Name&Mark (I)” code indicates the intent to include certain assignments. For example, the statement “replace xxx assignment with presentation,” would be coded under this.

iii. Assignment: Details

**Examples:**

- Details and description of an assignment for the course.

**Coding**

The “Assignment: details” include a more detailed explanation of a particular assignment, suggestions and considerations students should keep in mind while doing that assignments, if it’s broken down, the basic information about how it gets broken down, etc<sup>38</sup>.

Things of note:

- “Explicit information about assignments (e.g., length, breadth) can ... be provided as part of the course outline, but this may be more easily

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<sup>38</sup> Note the unit of analysis section for this sub-code.



provided later in the course, as assignments are presented. Some instructors prefer to hand out a description sheet for assignments before each is due, responding to any questions at that time” (Workshop Binder). The Assignment: Details (I) code is expected to capture this.

Assignment: Details (I)

The “Assign: Details (I)” code indicates the intent to include further details on an assignment. For example, the statement “see attached guidelines” or “details to be added,” would be coded under this.

iv. Assignment: Structure

**Examples:**

- Progress reports requested (may or may not be graded)
- An assignment that is broken down into smaller assignment
- drafts requested

**Coding**

This code attempts to capture the presence of an explicit structure within an assignment, towards helping students complete the assignment. As mentioned earlier, it most often co-occurs with the Assignment: name & mark code, Assignment details, and Course schedules.

Assignment: Structure (I)

The “Assign: Structure (I)” code indicates the intent to structure an assignment. For example, the statement “include draft outline,” would be coded under this.

v. Assignment: MRE

**Examples**

- The purpose of the latter is to give the student feedback regarding the extent to which they are successfully integrating the information as it is being presented and discussed in class.
- The purpose of this assignment is to increase awareness of administrators' legal responsibilities as introduced in the course.

Students will be evaluated on their ability to find thoughtful and creative leadership approaches that will help them meet their legal obligations to students.

Quotes coded here respond to the questions: why is this assignment important? Why am I asking you to do this assignment?

### **Assessment of Assignments**

As examples are quite specific to the sub-codes, they will be discussed in the coding section below.

#### **Codes**

- i. Assessment: Criteria
  - Assessment: Explicit Criteria
  - Assessment: Criteria (I)
- ii. Assessment: Options to Students
- iii. Assessment: Distribution
  - Assessment: Distribution (I)
- iv. Assessment: (I)

#### **Coding & Examples**

##### ***Unit of Analysis***

The unit of analysis for Assessment codes is one complete item, that is: one complete criteria or option. Sometimes Assessment: option co-occurs within Assignment details: it then takes on the parent code's unit of analysis.

Assessment: Distribution is handled differently; for ease of explanation this is discussed in detail within its coding section.

## **Coding**

### 1. Assessment: criteria

#### **Examples**

- Assignments will be judged on:
  - correctness,
  - amount of work,
  - structure and completeness,
  - originality,
  - presentation.

#### **Coding:**

This refers to the provision of explicit criteria to a) help students understand the nature of the learning task, and b) ensure reliability when grading.

The code Assessment Criteria has three levels:

- i. Assessment: Explicit criteria: used when detailed and explicit criteria have been provided;
- ii. Assessment: Criteria: used when some criteria have been provided (such as in the example above), but the criteria is not particularly detailed, or even clear; and
- iii. Assessment: Criteria (I): used when there is an intent to provide criteria, but this hasn't been done as yet (for example: assessment criteria to be added).

Examples of each of these categories are available upon request.

### 2. Assessment: Options to students

## **Examples**

- If you hand in a summary statement and 3 main ideas (1-2 sentences each) on the reading assignment prior to each lecture (despite the fact that these exercises will not be graded), you will be given an option. If you have a higher grade on the final exam than on the midterm exam, you can choose the grade of the final to count for 60% of the course.
- All course requirements (deadlines, readings, etc) can be modified to accommodate the needs of persons with disabilities who are registered with the Office for Students with Disabilities or upon confirmation from the Director of the School of Social Work.
- Group presentations will be allowed by arrangement. Please note however that one mark will be assigned for the group regardless of the individual input of each student.

## **Coding:**

Assessment options are coded when an instructor gives students an option in how they will be assessed, and the types of assignments they can do.

### 3. Assessment: distribution (across course)

#### **Examples**

- Lab Assignments (weekly) 15%
- Assignment #2 Wednesday, March 2 @ 23.59:59
- 35 % on the final exam.
- 1 week after assignment is handed out

## **Coding:**

### Unit of Analysis

Assessment distribution seldom occurs alone, and as such, takes on the unit of analysis of its parent code (usually, Assignment: name and mark, details, or course schedule);

### Coding

Coding for Assessment: distribution follows a two step process:

- i. It is always dual-coded with Assignment: Name & Mark, whether or not a date is indicated; the coding either indicates the month in which the assignment is due, or is coded with the Assignment: Distribution (?) code.
- ii. In coding the rest of the course outline, if the date for a particular assignment is later provided, I remove the initial “?” code associated with it.
- iii. A final exam or paper is always coded as due in month 4 of a semester, whether or not this is indicated by the instructor.

The reason for this type of coding is: for my analysis I need to have a clear indication of whether all assignments’ distribution has been captured in the coding.<sup>39</sup> Only then, can I take a decision about whether an instructor is mostly assessing students towards the end of the semester, or whether he’s simply not provided dates.

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<sup>39</sup> There are two items playing out here: first, has a date been provided for all assignments; and second, how are the assignments distributed over the semester. Though we’re interested in item 1, it is often the case that instructors provide due dates for smaller assignments in class. The purpose of this code is to look at distribution.

This code has the following categories:

Assessment: Distribution (?): used when dates are uncertain;

Assessment: distribution (I): used when there is an intention to provide the date;

Assessment: distribution (M#)<sup>40</sup>, each semester starts at M1 (month 1), and assignments are coded according to the month in which they are due<sup>41</sup>.

4. Assessment: (I)

Assessment (I) indicates intent to provide assessment information; statements such as “include assessment information” will be coded here.

## **5.5 After the coding**

### **5.5.1 Reports Generated**

After coding the course outlines, the Hermeneutic unit (within which all the course outlines sit) was filtered in a variety of ways, and certain reports were generated, to respond to questions I asked of the data.

The following reports were generated:

- i. The total groundedness of each code for all pre-Workshop course outlines
- ii. The total groundedness of each code for all post-Workshop course outlines
- iii. The groundedness of each code within each individual course outline.

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<sup>40</sup> # stands for the month number: 1–4.

<sup>41</sup> In one instance I used W#, as the course was spread over 6 weeks.

- iv. A list of co-occurring codes for Instructional strategies, within each hermeneutic unit.
- v. A list of quotations associated with the following codes:
  - Instructional Strategies: Informing, Practice, and Other
  - Assessment Name & Mark

Information from these reports was entered into the Workbook: Master Table—Course Outlines, in the following worksheets: General Information, Learning Outcomes, Instructional Strategies, Assessment, Instructional strategies and Assignments: detailed information. More detailed specifics of the data entered into these worksheets are discussed below.

#### **5.5.1.1 Entering information into the Data Table & Data Analysis**

##### **General Information**

I earlier suggested that Course Outlines where “General Information” had a groundedness of sixteen would be optimal. However, as I pointed out, this is not a conclusive number. Subsequent to coding, the groundedness for General Information in each pre and post-Workshop course outline is entered into the worksheet “General Information (Master).” After this, a summary is generated in response to the following questions:

1. How many *pre*-Workshop course outlines included General Information?
2. How many *post*-Workshop course outlines included General Information?
3. What was the total number of times “General Information” was coded (groundedness) in the *pre* v/s *post*-Workshop course outlines?

### **Course Materials**

The information for groundedness of each sub-code is entered into the Worksheet "General Information (Master)" (available upon request) under the appropriate heading. Responses to the following questions are generated:

- i. Did all participants use the course materials category pre and post Workshop? If not, what was the difference in numbers of participants using this code in their pre v/s post-Workshop course outlines?

*Subset of participants using course materials:*

What is the difference in the average number of course materials in pre v/s post-Workshop course outlines?

- ii. What is the difference in the total number of course materials used in pre and post-Workshop course outlines?

You will note that in spite of rationalizing earlier in the codebook, that the groundedness of course materials was of no interest to us, in that we cannot make a value judgment about a greater or lesser number of course materials being used for a course, two of the three questions I ask here refer to just such numbers. While agreeing that we cannot make a value judgment on these numbers, I was curious to see if there was a change in the numbers of course material being used pre and post the Workshop.

### **Course Content**

Data about the groundedness of this code is entered into the Worksheet "General Information (Master)" (available upon request). The following information is checked:



- i. How many course outlines include a section on course content pre and post the Workshop? (Any level of course content: Course Content, Topic List, Intention, MRE, is accepted as evidence of a section)
- ii. How many course outlines included concept maps pre and post the Workshop? What was the difference between the pre and post numbers?
- iii. What were the total instances of concept maps in the pre Workshop course outlines, versus the post Workshop course outlines?

Though it is possible to get more detailed information about course content, levels of course content, etc. from the data, these questions were thought to sufficiently summarize the information we are interested in.

### **Learning Outcomes**

The groundedness for this data is entered into the Worksheet: Learning Outcome (Master) (available upon request). The data is summarized in response to the following questions:

- i. What was the total number of learning outcomes used pre and post the Workshop?
- ii. How many pre-Workshop course-outlines used learning outcomes? How many of these learning outcomes were code-able?
- iii. How many post-Workshop course-outlines used learning outcomes? How many of these learning outcomes were code-able?

*Subset of code-able learning outcomes: the following questions were asked:*

- iv. In each course outline, pre and post, what percentage of learning outcomes were assessable, concise, learning centered, and clear?

- v. What was the average percentage of assessable, concise, learning-centered, and clear learning outcomes (individually calculated) in the pre-Workshop course outlines?
- vi. What was the average percentage of assessable, concise, learning-centered, and clear learning outcomes (individually calculated) in the post-Workshop course outlines?

### **Instructional Strategies**

The groundedness for each code was entered into the Worksheet: Instructional Strategies (Master). In addition, the following co-occurring codes were checked and entered into this sheet<sup>42</sup>:

- Informing + in-class,
- Informing + out-of-class,
- Practice + in-class,
- Practice + out-of-class,
- Other + in-class
- Other + out-of-class

Groundedness for each of these sets was recorded in the Instructional Strategies (Master) worksheet, in a Master Results Worksheet (this is not attached, but can be made available upon request).

As previously mentioned my interest (based on the Workshop checklist for use of instructional strategies) was to examine:

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<sup>42</sup> Due to issues with the unit of analysis, co-occurring data was checked manually against each course outline, to ensure accuracy.

- Did the course author provide a structure for feedback?
- Did Course Authors use both Informing & practice strategies for their courses?
- Were informing and practice strategies achieved through in and out-of-class formats?

The following questions were asked of the data:

- How many course outlines used feedback as an instructional strategy, pre v/s post-Workshop?
- What was the average ratio of Informing: (Practice + Other) strategies used, pre v/s post Workshop outlines?  
*(average use of informing : all other strategies pre / post)*
- How many course outlines used Informing as well as Practice/Other strategies, pre v/s post-Workshop?

**From subset above:**

*(i.e., Course outlines using both informing and practice/other strategies)*

- What was the average ratio of informing: (Practice + other) strategies used, pre v/s post-Workshop?  
*(average number of informing strategies : average number of all other strategies per course outline, pre v/s post)*
  - How many course outlines used in + out-of-class strategies, pre v/s post-Workshop?  
*(course outlines using informing, practice, in & out-of-class strategies)*
- How many course-outlines used informing strategies in and out-of-class, pre v/s post-Workshop?  
*(course outlines using informing in class, and informing out of class)*
  - How many course outlines used (practice +other) strategies in and out-of-class, pre v/s post-Workshop?

*(Course outlines using strategies other than informing, in class as well as out of class)*

### **Assignments & Assessment**

The groundedness for each of the sub-codes is entered into Worksheet:

Assignment (Master). Responses to the following questions are generated from the data:

1. How many course outlines included the codes (calculated individually): structure, options, and criteria, pre v/s post-Workshop?
2. How many course outlines included at least one instance of: Assignment: Name & Mark + Assignment: Details, pre v/s post-Workshop?
3. How many instructors had distributed assessment over at least 3 of the 4 months in a semester (or 4 of 6 weeks), pre v/s post Workshop?

It is possible to summarize further information from the data available, but these questions were thought to reasonably capture what is of interest to us.

To examine if participants used varied Assessment methods in their course outlines, each assignment name (for each course outline) was recorded in the Worksheet: IS & Assignment Detail.

## **5.6 E. Items under Question**

### **5.6.1 Alignment**

Not Coded

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