PUBLIC SPHERE THINKING IN CURRICULUM DEVELOPMENT: MAPS, METAPHORS, AND AGENCY

by

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Abstract

This study investigated the relationship between the curriculum development process of curriculum mapping in an undergraduate department and faculty-member agency. Participants were 13 faculty members responsible for delivering a four-year bachelor’s degree in a college environment. Faculty member experience in the department ranged from 2 to 40 years. The curriculum mapping project utilized facilitated discussion, curriculum surveys, graphs and visual analytic software to represent a set of nine core college-wide competencies and a set of eight department-defined competencies across the course requirements and progressions of the program. The final maps produced were interactive and visual in nature. Participatory action research was the chosen methodology for this study. Faculty members co-designed both the goals and process of mapping undertaken. The research data for the study were collected using pre- and post-mapping interviews, curriculum documents, and research notes. The results suggest that as a quantifiable reduction of lived experience, curriculum mapping fails to meet its promises; however, as a tool for fostering curriculum discourse and faculty agency, the process of mapping was generative for faculty members. Increases in shared understanding of instructional methods, assessment methods, program structure, and meta-curriculum competencies were evident. In addition, increases in faculty member’s perceived freedom were connected to increases in understanding and open discussions of actual curriculum-related freedoms. Emergent theoretical insights of this study relate to the use of public sphere thinking by curriculum facilitators to foster specific conditions supportive of faculty member agency, and the role of learning metaphors that relate learning to travel and place. From this convergence of thought, curriculum mapping becomes a tool to understand the wider curriculum village in which curriculum is enacted between students and faculty members. Within a curriculum village metaphor for understanding an undergraduate program, curriculum maps forged in the public sphere conditions of rational critical debate, communicative freedom, and attempts at consensus represent powerful communicative acts by faculty members. Curriculum maps, in this frame of thought, represent internal and external commitments made by faculty members. The metaphor of a curriculum village and application of public sphere thinking provides new analogic tools to those investigating curriculum development, facilitation, and representation.

Keywords: curriculum development; curriculum mapping; curriculum representation; undergraduate curriculum; faculty member agency, Habermas; public spheres; metaphoric thinking; analogic thinking;
This work is dedicated to those who value education as a transformative act, and as a result, have not been afraid to challenge the norms that surround us. You have taught me that there is so much more to education than self-actualization. You have shown me there is endless complexity to embrace in our natural and social worlds. You have led me to the belief that social justice is a forever project that will always require educators. Rebecca, since the day we met you have been the most influential person on this list. This work is dedicated to you most of all.
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Chapter 1: Introduction

For practitioners, a problem emerges not as a result of some dilemma defined within the context of an academic discipline. Rather a problem emerges out of some felt incongruity in lived experience wherein critical reflection as well as thoughtful action is drawn upon to heal the breach. (Demetrion, 2000, p. 119)

Curriculum has many definitions that vary in their attention to student learning processes, the role of context and institution, and the role of the instructor; however, they can be broadly categorized into prescriptive and descriptive definitions (Glatthorn, Boschee, & Whitehead, 2009). This study is primarily concerned with prescriptive curriculum, and as a result, focuses on the experiential and program outcome intentions of Douglas College as an institution and the instructors who deliver the Bachelor of Physical Education and Coaching (BPEC) degree in the Sport Science department in particular. Curriculum from this view represents an articulation and manifestation of intention from one to another. This intentionality may take on a number of intermediate forms between first conception and the learning moment. Policy, learning outcomes, curriculum guidelines, textbooks, lesson plans, and the physical construction of learning environments are all examples of this intermediate phase of curriculum development and implementation.

Capturing curriculum intentions in various forms between first articulation of intention and the pedagogical moments that bring those intentions to life
requires curriculum representation. Curriculum mapping is the representation tool researched in this study with the potential to not only represent content, but also, become a curriculum touchstone with lasting communicative power for those involved in creating the curriculum maps. In one regard, curriculum maps are the products of curriculum deliberations. Upon deeper consideration, the process of creating curriculum maps - i.e. curriculum mapping - brings both intentions and descriptions of students' lived experience within a program into discursive light, and therefore, creates learning opportunities for those involved in their creation.

In this study, faculty members were the participants involved in creating the curriculum maps. Faculty members carry the primary responsibility in an undergraduate program for creating student-learning opportunities that represent the intentions of the institution, department, individual faculty members, disciplines, professions, and students. The translation of intentions into learning experience requires faculty members to interpret the curriculum representations that surround them and take initiative. The taking of initiative and the exercising of control over learning experiences are expressions of a faculty member's curriculum-related agency. Curriculum-related agency is essential to the success of undergraduate education characterized by both high standards and high levels of instructor autonomy. The relationship between faculty agency and curriculum mapping as a process of curriculum development is at the heart of this exploratory study.

Curriculum representation tools, such as mapping, emerge in response to our collective difficulty with understanding and communicating the complexities of
curriculum and learning in general. The BPEC degree studied in this project, and described in more detail later in this chapter, is a good example of curriculum complexity due to its attempts to meet multiple and possibly contradictory goals simultaneously. The program underwent significant growth prior to this mapping project, and as a result, new faculty members hired during and after the growth phase were introduced to program complexity without comprehensive curriculum representations that captured the full intentions and design rationale embedded throughout. In this regard, there was a weakness in the curriculum practices of the department related to information sharing and curriculum induction that contributed to the motivation for this project. Hubball and Gold (2007), drawing on comparisons to the Scholarship of Teaching and Learning (SoTL) and the role of practitioner inquiry in educational research, label the study of curriculum practices, such as the study of curriculum mapping, the Scholarship of Curriculum Practice (SoCP). The SoCP in this study was motivated by a “discrepancy between an educational practice and the expectations in terms of which the practice was undertaken” (Demetrion, 2000, p.2). The educational practice in this case related to curriculum development and representation, while the expectations I was not achieving in my role related to the quality, quantity, and efficiency of curriculum-related discourse in the department.

My curriculum-related roles in this study included coordination of the BPEC degree development, overseeing program growth as we expanded from a two-year program to a four-year program, creating new courses, and supporting the curriculum development of other faculty members across the
A more complete curriculum context is provided in the second half of this introduction.) As the complexity grew in the program due to the development of a new four-year degree, the addition of new courses, new experiences being created for students, new faculty members joining the department, and institutional curriculum initiatives, the complexity of the curriculum became increasingly difficult to capture in meaningful ways for both new and existing department members. Beyond the felt limitations of representing curriculum complexity, I also experienced a sense that new and rich curriculum discussions throughout our department were not encapsulated in a process for organizing and recording our shared learning in ways that captured the fullness of our intentions and the richness of the debate. The disengagement risk related to having dead-end curriculum discussions, wherein excitement was initially generated but follow-through was limited, became an additional motivation to reconcile the curriculum practices undertaken by department members with the energy and enthusiasm they brought to the debate. In short, the curriculum representation tools and associated curriculum processes we were using were simply not responsive enough to our curriculum-related ambitions. In this regard, curriculum maps based on database technology were identified as a tool with potential to capture our initial curriculum-related excitement generated through rich group discussions and sustain our engagement beyond the initial phase. (This potential is elaborated upon in Chapter 2.)
As mentioned above, curriculum work and translation into pedagogy requires faculty initiative which, in turn, stems from faculty member agency. For faculty with significant curriculum-related agency, the practical question that emerged was: How do our curriculum practices sustain our currently high levels of faculty agency? For new faculty members, and those for whom more agency may be desirable in curriculum-related discussions, the question was: Can specific curriculum practices increase curriculum-related agency, and if so, how? Increasing or maintaining high levels of agency was an explicit goal of this project from its outset and it influenced the research purpose, the choice of methodology, the details of implementation, and the evaluation of successes and failures in the project. While my desire to have a curriculum mapping process contribute to agency was present at the outset of this project, that desire was tempered with a research sensibility that recognized that agency could just as easily be undermined by formalized curriculum representation processes. To address both the concern of pre-conceived bias in my research and the risk of pre-conceived outcomes with regard to the curriculum itself, a participatory action research methodology (Kemmis& McTaggart, 2004) based on Habermas’ (1962, 1989) public sphere theory was chosen.

Public sphere theory provided a number of elements deemed essential to align project goals and the research requirements of remaining open to iterative developments in the project, while encouraging dissension, debate, and recognizing negative outcomes. The key tenets of public sphere theory that influenced the methodology can be describes as follows:
• knowledge is socially constructed,
• agreement is strengthened by critical, rational debate of ideas,
• bracketing of power by those involved is required,
• new issues are allowed into a debate – i.e. problematization can occur, and
• mutual agreement represents strong communicative acts.

To be more blunt, the methodology chosen was such that one potential strong communicative act by faculty members could have been the rejection of the experimental curriculum mapping process. The combination of human agency theory (Alexander, 2005) and public sphere theory (Habermas, 1962, 1989) as foundations for this study come together in this key point. Human agency theory suggests that freedom to express oneself and act in accordance with one’s beliefs must exist in order for strong agency to be present. Freedom in this case includes the option to reject other’s ideas and process when it appears to undermine freedoms, understanding, or personal beliefs. From this perspective, participatory action research holds an emancipatory potential for faculty members by allowing for the social construction of understanding, bringing beliefs into light through prioritizing choices, and allowing faculty members to exercise communicative freedom.

In the chapters that follow, the theoretical backdrop for this study and the practical concerns of methodology are discussed in more detail. Chapter 2 situates this inquiry in the broader field of curriculum studies, looks at mapping as
a curriculum representation tool used in past studies, and addresses the relationship between public sphere theory and faculty engagement. Chapter 3 provides an overview of human agency theory in an effort to develop a framework for analyzing curriculum practices such as mapping based on their impact on curriculum-related beliefs, knowledge, and freedoms. Chapter 4 provides details about the methodology involved in both the mapping project and the research. The remainder of this chapter now provides a concise statement of purpose, outlines the contexts of the study, and provides complete chapter introductions at its close.

**Research Purpose:**

The purpose of this study was to gain insight into the theoretical and practical dimensions of curriculum mapping as they relate to the development of faculty members’ curriculum-related agency. The research goals are more precisely stated as follows:

1. To determine if the process and outcomes of curriculum mapping are desirable to faculty members, and if they are, attempt to identify the qualities of the process undertaken that were contributory to both the successes and failures of the project;

2. To explore the theoretical implications of adopting public sphere thinking (Habermas, 1962, 1989) and human agency theory (Alexander, 2005) as the underlying constructs for engaging in curriculum mapping; and
3. To explore the practical considerations for curriculum development facilitators of adopting public sphere thinking (Habermas, 1962, 1989) and human agency theory (Alexander, 2005) as the underlying constructs for engaging in curriculum development and representation.

The parallel workplace goals of this project were to increase faculty member agency through improved curriculum representation. Efficacy of the project in this regard is a relative and individual construct related to whether mapping had a positive impact on faculty member agency with respect to curriculum phenomena that come into focus during the mapping process.
Study Context

*That curriculum sits within context is a central axiom of curriculum theory, development and implementation. But what will count as a context? Upon what determinate contexts will curriculum theory be based? Which contexts will figure in the making of curriculum settlements, policy decisions and classroom practices?* (Luke, 2008, p. 145.)

This study of faculty member agency and curriculum mapping was situated in the Sport Science Department at Douglas College (DC) in New Westminster, British Columbia. The undergraduate curriculum mapped included all of the core sport science courses in the Bachelor of Physical Education and Coaching (BPEC) program. This program has been accepting students since 2007, and as a result, the Sport Science department has experienced significant growth between 2007 and the present. In order to situate this inquiry in its educational context, the institutional, curriculum and human resource environments are discussed below as a backdrop to the mapping project description and results that follow.

**Institutional context: Douglas College.**

Prior to 2003, Douglas College’s primary mandate was to serve as a 2-year university-transfer institution. Most of the first and second year courses offered in Sport Science up until 2003 articulated with the major universities of British Columbia in order for students to receive credit when transferring between institutions at the end of first or second year. In order to articulate a course and have it registered in the BC Transfer guide, there must be similarity in content
and scope between sending and receiving institutions. The assessment of worthiness for transfer of a course resides in the hands of the receiving institution (the Universities). The requirements of articulating courses from a sending institution to a receiving institution have an impact on the perceived freedom of faculty members, and as a result, the mandate of the institution has a direct impact on curriculum-related faculty agency.

In 2003, as part of the British Columbia Degree Authorization Act, Douglas College’s mandate changed to allow the offering of undergraduate degrees. In response to high demand for physical education and coaching programs in the Province, the Ministry of Advanced Education approved a Bachelor of Physical Education and Coaching (BPEC) degree in the Sport Science department. The program enrolled its first class in 2007. The overall mandate of Douglas College may have changed to allow the offering of a limited number of approved degrees; however, the majority of students still choose Douglas College for its flexibility in offering university transfer courses. In keeping with the role of Douglas as a sending institution to university programs, the first and second year of Sport Science classes have remained university transferrable and are registered in the BC Transfer Guide. The ongoing articulation of first and second year courses is a high priority of the department due to the fact that the majority of the department’s students are destined for another institution after one or two years. Of the 110 students accepted annually into first year programs, only 35 enrol in the BPEC program. The result of the mandate change for the Sport Science department was a relaxation of the articulation constraints for upper level and
BPEC specific courses and maintenance of the status quo with regard to its status as a sending institution for lower level university transfer courses.

**Institutional context: the competency shift in undergraduate institutions.**

Undergraduate post-secondary institutions are part of a shift in shared epistemology from disciplinary-based models of organization and curriculum design based on the dominant positivist and empiricist models of the 20th century to interdisciplinary models embracing pragmatist and post-structural beliefs. Through their work with instructional designers, Bird, Morgan, & O’Reilly (2007), have identified that learners’ expectations of post-secondary education are changing from valuing disciplinary knowledge production as primary in their evaluation of an education to an increasing valuation of applied knowledge production drawing on multiple disciplines. They argue that disciplines “are no longer the sole producers of knowledge” and there has been a “‘relative downgrading’ of traditional disciplines, particularly in the social aspect of knowledge production” (p. 32). The implication of this shift is a move to curriculum and pedagogy that highlights problem-based learning, social construction of knowledge and solutions, applied research and interdisciplinary thinking. Authors such as Piaget (1972), Meeth (1978), Ackerman & Perkins (1989), and Jacobs (1989) have all been part of this trend and extolled the virtues of interdisciplinary education on both theoretical and practical terms as a response to ever expanding content knowledge the shelf-life of which is
simultaneously diminishing due to the increasing speed of new knowledge creation.

The increase in articulation of core competencies, measurable skills, and knowledge as represented by learning outcomes and prescribed experiences is also occurring within a “higher education context of increasing competition for student recruitment, interinstitutional student mobility, credit transfer flexibility, and quality assurance policies” (Hubball & Gold, 2007, p. 5). Competencies from an instrumental perspective are a promise of quality and a guarantee of ability from the institution to the student.

The Bachelor of Physical Education and Coaching (BPEC) at Douglas College is firmly situated in the context described by Hubball & Gold (2007). The BPEC degree represents a return to applied studies in physical education and coaching and was designed in response to student and community demands for credentialing embedded within the undergraduate educational experience. Credentialing is exercised in a variety of forms: by proxy authority granted by external agencies; by industry supervised and documented experience; and/or by certification testing. In all forms of credentialing partnerships, the post-secondary partner holds a moral obligation to prepare students to be competent in the eyes of the external partners. In the BPEC program, three industry-recognized credentials are embedded in the curriculum (see Table 1). In the process of adopting external curriculum in an undergraduate program, external requirements and content must be aligned and articulated with specific courses and, in some cases, specific assignments. For the instructors, the demands and
intentions that accompany the added responsibility and their personal curriculum implementation orientations (Fullan & Pomfret, 1977, Snyder, Bolin, & Zumwalt, 1992) will lead to an assessment of whether the external content and requirements are considered enabling or restrictive constraints.

In addition to credentialing, instructors have to deal with internal competency frameworks designed by institutions, faculties, or departments. Post-secondary institutions, such as Douglas College, identify themes and competency frameworks to meet multiple goals simultaneously, including but not limited to marketing, peer review and accreditation, faculty development, institutional change, student transfer, and as an educational promise to its current and future students. The following quote taken from the Delaware Community College website provides an example of a multipurpose rationale for adopting themes and related core competencies.

Competencies provide a distinct advantage to students, the educational institutions to which they transfer and future employers. They help transfer colleges determine the exchange of learning that has taken place. They help employers identify the skills a DCCC graduate should possess. They also assist the College in assessing student programs and non-traditional learning. (Delaware Community College Competencies, Retrieved July 6, 2009, From: http://www.dccc.edu/catalog/competencies.html)

The Douglas College Academic Signature in focus for this study further exemplifies the ‘beyond learning’ intentions that institutions have when adopting a set of themes and competencies, as illustrated here:

The Douglas College Academic Signature will promote a distinctive set of characteristics for our college and for its graduates. It will also show prospective students the richness of the educational experiences they will encounter here, and give them another
reason to select Douglas College for their postsecondary education. (Douglas College, March 2007, p. 3)

**Institutional context: the Douglas College Academic Signature.**

The Douglas College Academic Signature (DCAS) and Sport Science Signature (SSS) were the two meta-curriculum frameworks included in the mapping phase of this inquiry. Douglas College began its thematic curriculum development and implementation process in 2004. Included in this process were numerous consultations with faculty members inviting their input. The result of the consultation process was the determination that *inquiry, reasoning, communication* and *citizenship* would be the thematic category labels for the nine core competencies that Douglas College graduates should embody and demonstrate during, and as a result of, their educational experience. Each core competency is defined by three levels of learning outcomes to guide articulation of the competencies with existing or new learning experiences or assessments in programs. Table 1 provides an overview of the DCAS themes and competencies and Appendix A provides a more detailed description of the nine core competencies and a sample of the three levels of learning outcomes related to the competency of information literacy.
<table>
<thead>
<tr>
<th>Organization related to competency or certification</th>
<th>Competency or certification description:</th>
</tr>
</thead>
</table>
| **Douglas College – Institutional mandate**        | **D.C. Academic Signature core competencies:**  
  - Inquiry  
  - Information Literacy  
  - Technological Literacy  
  - Reasoning  
  - Quantitative Reasoning  
  - Analytical Reasoning  
  - Communication  
  - Spoken Communication  
  - Written Communication  
  - Intercultural Communication  
  - Citizenship  
  - Teamwork  
  - Social Responsibility |
| **Sport Science Department – BPEC program competencies** | **BPEC program core competency categories:**  
  - Activity Management  
  - Authentic Assessment and Evaluation  
  - Holistic Awareness  
  - Inclusion  
  - Physical Literacy  
  - Planning  
  - Professionalism  
  - Qualitative Reasoning |
| **British Columbia Parks and Recreation Association** | 1) High-Five – Principles of Healthy Child Development  
  2) Fitness Theory Certification |
| **Coaches Association of Canada – National Coaching Certification Program (NCCP)** | 1) NCCP Competition Introduction - "trained" status (five embedded modules taught and assessed across the curriculum)  
  1. Basic Mental Skills  
  2. Nutrition  
  3. Make Ethical Decisions  
  4. Teaching and Learning  
  5. Plan a practice and design basic sports program  
  2) NCCP Competition Development - "trained" status (seven embedded modules assessed across the curriculum)  
  1. Psychology of performance  
  2. Leading drug free sport  
  3. Conflict management  
  4. Coaching and leading effectively  
  5. Injury prevention and recovery  
  6. Developing athletic abilities  
  7. Developing athletic abilities (energy systems) |
As an institutional initiative, the DCAS is open to interpretation by faculty members regarding the level of accountability it represents and its alignment to personal beliefs about learning and curriculum. The intentions ascribed to the College by faculty members relate directly to institutional actions that surround the curriculum, including professional development opportunities, development of performance standards, development of standardized testing, and promotion of the DCAS both inside and outside of the institution. Interestingly, once passed by the Douglas College Education Council in 2007, the DCAS received very little public promotion, was presented in very few workshops after 2008, and saw a reversal of support in the form of accountability to the initiative. For a period of time after the DCAS introduction, new courses had to articulate their DCAS learning outcomes as part of the curriculum approval process, however this requirement appears to unofficially have lapsed and new curriculum guidelines are regularly approved by Faculty Education Councils and the College Education Council without the required DCAS articulation form. Figure 1 provides a flow chart of the actions taken by the College in support of the DCAS since 2005.
The reduction in support for the DCAS by senior administration may relate to a change in both the vice-president academic and president positions in 2008 and 2009 respectively. There were also grumblings of resistance from faculty members when the College decided on pursuing an 'accounting approach' while simultaneously reducing the professional development and public support of the initiative through internal communications and advertising. Accountability to the DCAS increased when policy passed in 2009 required all departments to articulate their individual courses with the DCAS and report their results to their respective Deans for record keeping. This was an attempt to spread the DCAS as a curriculum innovation from the realm of voluntary early adopters, to the
realm of the early and late majority (Rogers, 2005). The accountability interpretation of the College’s actions may have led to resistance and the related apathy by new senior administration towards the initiative. The implementation of the DCAS resulted in a situation in which, depending on one’s personal beliefs, values, and assessment of the DCAS, the initiative could simultaneously be perceived as a worthy educational aim and an unsolicited restriction on academic freedom. Of course, this personal assessment is dependent on whether one sees the DCAS at all!

The timing of the institutional events surrounding the DCAS has direct importance to this inquiry in light of the timing of the development of the BPEC degree and the hiring of new faculty members from 2007 to the present. Faculty members may or may not have known the DCAS existed (depending upon when they were hired), they may have only experienced it in its accountability form (i.e. by filling out paperwork to ‘account’ for it in courses), and there may have been no institutional initiatives to celebrate, share, learn about, or otherwise create awareness of the DCAS since their arrival.

Curriculum context: themes, competencies, and meta-curriculum

In their idealized form, the Douglas College Academic Signature (DCAS) and the Sport Science Signature (SSS) are a set of curriculum themes with related outcomes and competencies associated with each theme that, through a process of operationalization into learning activities and outcomes, would be embedded in multiple courses across a curriculum. Themes may be what Ackerman and Perkins (1989) describe as meta-curriculum, comprised of
learning skills and strategies selected on the basis of their value in helping students (1) acquire the curriculum content being taught and (2) develop the capacity to think and learn independently. Or, themes may be disciplinary in nature, focusing on the “syntax of a discipline, its methods of discovery and justification … its epistemological form, the tools of investigation and critical assessments used by scholars to discover new knowledge (Schwab, 1982, also Hirst and Peters, 1970; Hirst, 1974)” (Alexander, 2005, p. 349). Through an instrumental lens, a curriculum theme is an explicitly stated intention of an organization or program to direct its educational efforts and scarce resources towards a specific type of knowledge, understanding and action.

Use of the word theme to describe cross-curriculum design intentions is a deliberate choice to get past what Sumsion and Goodfellow (2004) have called a “confusion of terms … that are often ill-received, poorly defined, and frequently, but not always, used interchangeably” (p. 329). Competencies, skills, values, signature items, graduate attributes, core capabilities and dispositions are a number of terms used to describe the aims and outcomes of programs that have embraced thematic delivery. Using the word themes also embraces the complexity of the curricular process by deliberately suggesting that an education program is a living story, and therefore, 1) there are usually multiple and concurrent themes at play, 2) there are varying levels of explicit and implicit attention brought to thematic areas, and 3) themes are open to interpretation.
Thematic curriculum selection as value-laden.

In this study, thematic curriculum design and enactment are positioned as value-laden as opposed to value-neutral activities. Philosophers and curriculum theorists continue to debate the axiomatic question posed by Plato (c360 BC) in “The Republic” and subsequently revitalized by the work of scholars such as Spencer (1896): What knowledge is of most worth? (Alexander, 2005). If all actions were equally worthwhile, themes would be unnecessary, however we know by way of grading, pre-requisites and graduating requirements that not all knowledge or action is of equal worth. Curriculum, including thematic curriculum such as the DCAS, embeds political choices into learning in an attempt to direct learners towards a specific future envisioned by those in power. Therefore, during the selection of curriculum themes and associated core competencies, moral choices may be necessary regarding which individual and collective educational aims are afforded a place in a curriculum at the thematic and institutionally-mandated level.

Curriculum by such a definition cannot be value-neutral and in most cases is normative. It often reproduces the dominant intentions and hopes for society at large, the institution, target professions, careers, or canons of thought invoked by disciplines. As the discussion progresses from conceptualization to operationalization, curriculum themes become imposed, inherited, adopted, opposed, supported or otherwise ignored by faculty in relation to their personal evaluation of an initiative’s educational worth. Given sufficient freedom, the choice to implement a particular curriculum initiative such as the DCAS is reliant
on an assessment of the initiative in relation to one’s personal beliefs and values and the determined worth in relation to the cost of change. This boundary space between the intended curriculum (BPEC, SSS, DCAS, BCRPA, NCCP, etc.) and the taught curriculum is where this study of faculty member agency, curriculum mapping and curriculum implementation resides.

*Curriculum context: complexity, requirements and pressures.*

Simply mapping the course structure of a program is not complicated enough, nor detailed enough to require the data management tools used in this study for mapping (Currickit, Excel and VUE software). The complexity of the BPEC curriculum is owing to the fact that it was designed within an institutional context that was shifting for a student populace and professional community with increasingly instrumental demands of the institution. The program joins a growing set of programs trying to achieve ‘academic yet applied’ outcomes. The BPEC program attempts to integrate high levels of experiential learning while meeting widely held academic standards for entrance into teacher education programs across Canada or graduate schools in related fields. Of the first nine graduating students (May, 2009), seven attended professional programs (B.Ed. or PDP), one pursued graduate studies in kinesiology at the Master’s level, and one entered the workplace full-time.

To meet the academic requirements, while maintaining the high experiential and practical focus of the program, the BPEC degree contains a set of internally chosen and externally imposed meta-curricular competencies and certifications embedded throughout the courses in the program academic
standards. Table 1 lists all the external requirements that are embedded in the BPEC. The Douglas College Academic Signature (DCAS) has a set of core themes relating to information literacy, technology literacy, quantitative reasoning, analytical reasoning, spoken, written, and intercultural communication and the citizenship competencies of teamwork and social responsibility. The Sport Science Signature (SSS) relates to the key areas of competency identified during the BPEC program design that occurred between 2005 and 2007 (see Appendix F). Areas wherein it was determined that students needed to demonstrate competency included: activity management, authentic assessment and evaluation, holistic awareness, inclusion, physical literacy, planning, and professionalism. The High Five and BCRP Fitness theory certifications are content driven certifications offered by external agencies integrated into specific courses and delivered by instructors certified as trainers. Finally, the National Coaching Certification Program (NCCP) modules for coaching certification are integrated across 10 different courses in the program. These content specific modules relate to material required for coaching certification such as nutrition knowledge, ethics, injury assessment, planning a practice, and psychological foundations of sport. In all cases, the final delivery and integration of material is left to the expertise of the course instructor.

While some of these influences on the BPEC curriculum relate to inter-disciplinary competencies and others relate to disciplinary knowledge, they all share the characteristic of being external requirements that the instructors have to consider in order for the BPEC degree to be experienced in the vein that it was
designed. In combination, they also create an incredibly complex curriculum environment for any individual instructor when considering pre-requisite knowledge, course requirements and continuity of experience and requirements for the students.

Not all of the components listed in Table 1 are required or measured in official ways; therefore faculty understanding and commitment to meta-curriculum themes and competencies is likely to correlate to the success of their implementation, and over the longer term, student success in achieving the stated goals of the program. Figure 2 shows the same influences listed in Table 1 organized to demonstrate areas of curriculum influence experienced by instructors working in the BPEC program. The direct pressures that are associated with the highest degree of measurement and accountability in the program are designated as graduating requirements for the BPEC in the Douglas College academic calendar. These include the NCCP materials, BCRPA materials, and High Five curriculum. The other curriculum pressures, such as the DCAS, SSS, adherence to disciplinary norms, and articulation with receiving institutions are labelled ‘felt pressures’ due to their presence in the surrounding curriculum discussions, documents, and ethos of the College and department. The labelling of these curriculum considerations as pressures presupposes negative consequence for some. From an eustress perspective, however, pressure and stress are necessary components of growth. The role of the agent in perceiving these pressures is paramount to their categorization as distressors or eustressors. Perception and assessment by faculty members directly relates
to perceptions of curriculum mapping as a practice and its impact on faculty member agency. By foregrounding the complexity and possibly competing curriculum influences within which this study is situated, the study of agency and faculty perceptions of curriculum initiatives gains importance with regard to understanding whether the program design and curriculum life-world of the instructors is sustainable.

Figure 2. External Influence on the BPEC Curricula
**Human resource context: faculty members**

As a result of all the changes between 2005 and 2010, enrolments in Sport Science courses increased by over 50% and the faculty grew from seven to thirteen full-time employees with additional part-time and contract instructors. During this transition, two of the original seven faculty members from 2005 also retired and two more hires left for personal reasons.

The scale of change and turnover led to a human resource environment energized by the enthusiasm and commitment of new faculty members. This energy is situated in a curriculum environment that is relatively new, still being tested and was not designed by the majority of those currently enacting it with the students. Due to the particular nature of change in this situation - i.e. new institutional mandate, new curriculum, new faculty and relatively few senior faculty members - informal and formal mentoring opportunities were rare for new faculty. This confluence of variables creates tremendous opportunities for new faculty and presents the problem of where to turn for historical and broad institutional and curriculum information related to the program.

The complexity of the curriculum described above, the difficulty of sharing the large amounts of information involved in curriculum, and the volume of change resulting in new faculty provide the backdrop to the curriculum mapping undertaken in this study. The promise of curriculum mapping, in particular its ability to foreground otherwise hard to uncover information about curriculum through an inquiry and dialogue process, suggested computer-assisted curriculum mapping would be a potentially useful tool for Sport Science faculty.
members to better understand their curriculum landscape, and as a result, experience a positive impact on their curriculum-related agency.

**Chapter Descriptions**

Chapter 2 situates this inquiry into curriculum mapping and faculty agency in the broader field of curriculum inquiry by demarcating the zones of inquiry relevant to the methods and questions of this study. The advertised potential of mapping to organize large amounts of curriculum-related data is discussed in light of the questions: What do the data represent? How can curriculum data be collected in meaningful ways? And, how are curriculum data interpreted by faculty members? Furthermore, faculty member’s quality considerations of curriculum enter into the discussion with regard to what digital curriculum maps look like and do. The curriculum maps in this study are socially constructed documents, which given the participatory methodology of this study, carries a set of creation, validation, and representation expectations. Chapter 3 concludes with a discussion of post-secondary curriculum mapping projects that have approached mapping both quantitatively and qualitatively with foci varying from accounting of curriculum items to the use of mapping as a collaborative process.

Chapter 3 addresses concepts related to faculty member curriculum-related agency. In order to deconstruct agency, Schwier, Campbell, and Kenny’s (2007) description of moral coherence and domains of agency along with Alexander’s (2005) description of strong assessment are utilized as foundations for understanding what might constitute a value-based or strong assessment that leads to action on the part of a faculty member. The role of understanding as a
component of agency and the interplay of belief, freedom and understanding that impacts agency provide a backdrop for understanding how mapping as a process or a metaphor may impact agency by affecting its constituent domains; namely understanding, perceived freedom in one’s role, and beliefs expressed as values. Chapter 3 concludes by addressing the role of analogic acts and metaphoric process (Gerhart and Russell, 2004) in shaping cognition and challenging beliefs.

Chapter 4 reviews the selection of participatory action research methodology (Kemmis and McTaggart, 2005) as the method adopted for this exploratory research. Kemmis and McTaggart ground their theory in Habermasian theories of public spheres and communicative action. The study timelines, data collection techniques, analysis techniques, and technological details are described in this chapter.

Chapter 5 introduces the results of the study by first describing the collective goals outlined by faculty members and then reporting on whether or not the study met those goals. This form of results presentation is consistent with participatory methodology allowing participants to shape both the goals and methods used to fulfil those goals. The findings are organized into a discussion of mapping products, mapping process, faculty agency, and emergent grounded theory relating to public sphere thinking and the metaphorical underpinnings of mapping as a curriculum representation tool.

Chapter 6, titled ‘From maps to villages: metaphor, public sphere thought, and agency,’ is the first discussion chapter dealing with emergent theory from the project and investigating the relationship between individual agency, public
sphere thinking and a metaphor based on travel and place. Human agency theory, premised on a need for understanding, freedom, and beliefs expressed as values, is explored as a nested concept within a public sphere identifiable by its goals of fostering shared understanding, communicative freedom and strong communicative acts. Furthermore, the nature of a ‘public’ is considered in light of the emergent metaphor of this study that considers curriculum mapping a process conducted by an identifiable curriculum village. Curriculum villages are identifiable by their commitment to shared goals, curriculum customs, and their connections to external publics.

Chapter 7 is the second discussion chapter of this inquiry and is concerned with organizing the insights from this study that relate to facilitating curriculum development and representation from a public sphere perspective in order to promote faculty agency. The chapter approaches the topic by providing a set of questions for facilitators to consider while exploring the curriculum village as a whole, the individual faculty member characteristics, the curriculum forms chosen for representation, and the role s/he is asked to carry out on behalf of the community.

Chapter 8 summarizes the key findings of the study and makes recommendations for those engaging in curriculum representation projects. Theoretically, the study concludes that public sphere thinking and human agency theory are conceptual aligned frameworks for understanding individual and group curriculum-related acts. The creation of meaningful curriculum maps is a strong communicative act by the members of a curriculum village as defined by their
shared interest in program goals. The limitations of curriculum maps stem from their reductive tendencies and the forms chosen for curriculum representation. To overcome their limitations, maps must represent a possibility for future problematization of curriculum by faculty members. Specific facilitation process and criteria for creating maps as living documents are discussed.
Chapter 2: Curriculum Mapping as Curriculum Practice

*Knowledge is no longer organized in a chain form (the one who knows teaches the one who does not know, who then can know and teach, etc.). It is now a network process, and everyone, the teacher as well as the learner, is equally involved in the network.*

(Cornu, 2004, p. 227)

The study of curriculum processes from paradigms well situated in larger curriculum theoretical constructs has been labelled the “scholarship of curriculum practice” (SoCP) (Hubball and Gold, 2007). Curriculum mapping constitutes a curriculum practice. An over-simplified mapping analogy suggests that mapping is the act of surveying a curriculum, taking existing information, codifying it and representing it in an accessible and useable form. The SoCP view recognizes that the acts of mapping comprise interpreting, including, excluding, aligning, and codifying, in an attempt to represent curricula. Curriculum mapping, therefore, is social and political in nature and exists within institutional and societal contexts that both enable and constrain certain forms of curriculum and learning.

As a component of a larger curriculum development process, mapping is imbued with the potential to impact individual and group agency by eliciting changes in curriculum and/or changes to instructional and assessment practices. From a critical inquiry perspective, mapping also holds the potential to bring to light components of a curriculum possibly hidden or previously ignored by the inhabitants of a particular curriculum landscape. An emancipatory and
democratic view sees curriculum mapping as part of an iterative learning spiral, wherein curriculum maps are continually developed, refined, and revisited to represent individual and community intentions and experience. Maps become locally constructed artefacts serving as heuristic devices for solving ongoing curriculum-related problems.

The above introduction highlights the possible upsides of curriculum mapping and its role in curriculum development. Experience teaches us, however, that reliance on unproven or untested theories and practices can lead to disappointment. We cannot ignore the possibility that curriculum practices, such as mapping, may also be negatively constraining, de-motivating, confusing or autocratic. In the name of scholarly scrutiny, therefore, this chapter aims to situate the study of mapping within the broader field of curriculum studies, including its relation to critical perspectives that concern themselves with hidden and null curricula (Schubert, 2008).

Locating this Study within the Zones of Curriculum Inquiry

The first act of curriculum scholarship is to situate this study in the broader field of curriculum-related inquiry and focus our attention on the particular curriculum areas of interest to this study. In its most reduced form, the study of curriculum mapping could be the study of a curriculum design and implementation project measuring the fidelity (Fullan & Pomfret, 1977) of curriculum intentions from conception to practice. Thanks to the reconceptualists (Pinar, 1975), and authors such as Schubert (2008), who made the ‘eclectic suggestion, referring to the fact that curriculum must be studied from multiple
perspectives, we can no longer take for granted the number of assumptions and presumptions about learning and curriculum that exist in a simplified fidelity model. To help organize the field of curriculum studies and to situate this project, Schubert’s (2008) eclectic suggestion for studying curriculum is expanded into the *Zones of Inquiry* model presented in Table 2, Figure 3, and Figure 4 (Storey, 2008).

When studying a curriculum initiative, multiple points of interest and theories are available to contribute to the understanding of the phenomenon. This ‘eclectic’ view of curriculum inquiry is also the most comprehensive (Schubert, 2008). Based on a material and experiential understanding of curriculum with students’ embodied and dispossessed learning at its core, Table 2 presents descriptions of six zones of curriculum inquiry that, when taken together, offer a comprehensive view of related curriculum phenomena. For example, when considering curriculum mapping of competencies or outcomes across these zones, an investigation may look at an array of influences and outcomes: How the experiences or outcomes represented in curriculum maps are embodied and demonstrated by students (embodied curriculum), how they are experienced in the classroom or field by students (experienced curriculum), how they are interpreted and taught by instructors (taught curriculum), or how they were created and intended as policy (intended curriculum). Furthermore, what is not included in curriculum mapping (null curriculum) and what is ‘implicit’ in the process or maps themselves with regard to influence and power (hidden curriculum) are topics of great interest to researchers taking a ‘critical stance’
(Curzan-Hobson, 2003) or employing ‘critical inquiry’ techniques (Connelly, He & Phillion, 2008). The relationship of each zone of inquiry to the others, i.e. teaching to experience; planning to teaching, null to intended, etc., represent boundary zones wherein curriculum-related interaction and interpretation are the main phenomena of interest to the researcher.

Table 2. Brief Descriptions of the Zones of Inquiry Depicted in Figure 2 (Adapted from Storey, 2008)

<table>
<thead>
<tr>
<th>Zone of inquiry</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embodied curriculum</td>
<td>The zone of curriculum inquiry most closely associated with the use of the term ‘currere’; “a reading and writing of self in relation to the world” (Schubert, 2008, p.409)</td>
</tr>
<tr>
<td>Experienced curriculum</td>
<td>The study of the curriculum as experienced “expands [the researcher’s] attention to thoughts, meanings, and feelings of students as they encounter it” (Schubert, 2008, p. 409).</td>
</tr>
<tr>
<td>Taught curriculum</td>
<td>The study of what teachers actually do and what they think they are doing rests between what is intended by curriculum designers and what is experienced by students and teachers during enactment.</td>
</tr>
<tr>
<td>Intended curriculum</td>
<td>The intended curriculum is the realm of curriculum designers, written curricula, and policy decisions. Recognizing the value-laden nature of who decides that which is of most worth, “how the intended curriculum is shaped through discourse, debate, politics, and by teachers, students, history, power, and ideology are all areas of critical inquiry into the intended curriculum (Storey, 2008).</td>
</tr>
<tr>
<td>Hidden curriculum</td>
<td>Inquiry into the hidden curriculum tries to identify what is taught and learned but not named in the intended curriculum. The marginalizing characteristics of curriculum are highlighted by studies and theorizing in this zone of inquiry. The discursive and physical construction of topics such as race, class, gender, culture, ethnicity, ability, religion or belief, place, sexual orientation, age, technology, and globalization are areas of study that have in-migrated and populated the realm of inquiry into hidden curriculum (Storey, 2008).</td>
</tr>
<tr>
<td>Null curriculum</td>
<td>Inquiry into the null curriculum identifies that which is ignored or excluded in the official curriculum. Often that which is excluded, in contrast to that which is included, provides insights into the ideologies or beliefs that underlie the curriculum (Schubert, 2008).</td>
</tr>
</tbody>
</table>

The six zones presented in Table 2 are presented visually in Figure 3 (Storey, 2008, p. 6). In this view, student experience of curriculum is at the centre
of the model and the zones of inquiry extending out from the centre represent areas of possible study to understand the curriculum enactment that occurs between students, faculty, and curriculum and policy designers. Each outer zone has an impact whether direct or indirect on the zones inside it. Furthermore, “the dashed lines between the zones are permeable and represent important boundary regions … The study of influence takes place in the boundary regions; it involves more than one zone and is often interpersonal and transactional” (Storey, 2008, p. 7). That is to say, curriculum related enactment decisions may involve group decisions, norms, rewards and/or punishments depending on the curriculum practice of interest and the context of implementation.

**Figure 3. Zones of Curriculum Inquiry Adapted from Schubert’s Eclectic Suggestion (Storey, 2008, p. 6).**

The Douglas College Academic Signature (DCAS) and the Sport Science Signature (SSS), as meta-curricula, can be studied across all the zones. Figure 4
illustrates this concept by laying a thematic content wedge relating to numeracy across all the zones of inquiry. Working from the outside towards the middle, we can ask: What is not included in the numeracy competencies? Who decided on numeracy as a theme and how do they benefit? Is the competency a suggestion or requirement for faculty members? How are faculty members teaching the competency? How are they assessing it? Is measurement voluntary or required? How are students experiencing it in the classroom and throughout their coursework? How is numeracy being embodied by students and demonstrated outside the classroom/institution?

**Figure 4. Zones of Curriculum Inquiry with Representative Thematic Layering**

This study of curriculum mapping and faculty agency is predominantly focused on the zones of inquiry related to intended curriculum, taught curriculum and the role of mapping as a curriculum practice in the boundary space between
the two. In spite of the location of mapping as an activity in the realm of intentions and influence over the taught curriculum, insights into the other zones of inquiry were not precluded from this study. For example, by adopting a critical stance (Curzon-Hobson, 2003) during discussions, interviews and analyses, identification of specific competencies, dispositions and themes that create tension or go unchallenged provide insight into those areas of the map and mapping process that touch on sensitive ground, are contestable, and possibly link to hidden and null curricula.

Limitations for this study based on the zones of inquiry in focus.

While viewing Figure 4 and considering the aims of this study, it is a noted limitation to a full understanding of meta-curriculum that the student voice is not directly represented in the data. Because the focus of this project was on multiple competencies, the qualities relevant to the practice of mapping, and the impacts of the process on faculty member agency, a conscious choice during the study design was made to work from the assumption that strong faculty agency ultimately leads to changes in instructor-student dynamics and the nature of the learning experience for students. The mapping process and its products are considered catalysts for personal and group inquiry into teaching practices (taught curriculum) and by extension they impact student experiences.

Mapping as a Component of Curriculum Development

The second act of curriculum scholarship explores curriculum mapping as a component of a comprehensive curriculum development framework.
Curriculum development can involve imagining new curriculum or reviewing and renewing an existing curriculum. The curriculum development process utilized by Peter Wolf and his colleagues in the Teaching Support Services (TSS) department at Guelph University (Wolf, 2008) captures the iterative nature of curriculum development and re-development (Figure 5). In the TSS model, mapping is the centre of the process. It is the potential locus for dialogue, insight, coherence for students, planning the future, faculty accountability, and historical context.

The central role of mapping in the Guelph process led to the creation of their internet-based curriculum survey software called ‘Currickit’ used in beta form in this study (see Chapter 4 for a complete description of the project and research methodology). Their model and the software represent an enactment approach (Snyder, Bolin & Zumwalt, 1992) to curriculum implementation, wherein the faculty members are involved in actively interpreting the knowledge, skills, and values deemed important to a program. That is to say, it is the responsibility of faculty members to create the pedagogical moments with students that lead to the eventual embodiment of curriculum intentions. Throughout the process, faculty members are involved in identifying the core knowledge, skills and values of a program, articulating their curriculum with external expectations, as well as, converting their intentions into learning opportunities through their pedagogy. The recognition of outsider influences on curriculum, insider desires to identify quality graduate attributes for themselves, and a process for articulating, reconciling and otherwise shifting responsibility from the outsiders to the insiders demonstrates a
comprehensive model of curriculum development that respects both instrumental considerations of curriculum development and psychosocial factors that contribute to its success.
With respect to mapping as a component of an overall curriculum development process, consideration by researchers and facilitators must be
given to the driving factor(s) behind the curriculum development or redevelopment being undertaken. Is it mandated? Is it time for review in the curriculum cycle? Is there an internal need that has been identified? In fact, internal needs and a desire to explore the merits of mapping for professional development drove this curriculum exploration. The BPEC program in focus for this study was under no official requirement to review its curriculum. The problems and opportunities discussed in the purpose and context of Chapter 1 emerged from within the department and were based on the department members’ existing curriculum practices and an interest in the potential of curriculum mapping by me as the practitioner/researcher who initially introduced curriculum mapping to the department. To emphasize the local motivation for this project, as opposed to responding to any mandate, the DCAS meta-curriculum had been accounted for across all Sport Science courses in the Fall of 2009. At that time Sport Science department members individually filed one-page worksheets with the Dean’s office articulating the sophistication of each DCAS competency in their course. Due to the lack of formal requirements or dominant concerns, this project represented an exploratory process versus a formal responsibility. From this position, voluntary exploration in the absence of formal requirement situated this project firmly in the realm of professional development bringing faculty engagement in the process to the foreground as a necessary component for project success.
Engaging Faculty Members

Due to the voluntary nature of this project, the characteristics of the faculty and community involved, and the need for post-project agency in the form of curriculum animation (Gose, 2005), it was deemed that engagement with the process would be heightened by a community-based approach. The faculty members of this department were already working in cooperative curriculum-related ways by sharing resources and pedagogical techniques across the department. Using Gose's (2005) concept of curriculum animation, this was a group of vital animators to begin with; therefore, the challenge of this curriculum process was not gaining faculty member attention or engagement, but avoiding undermining their already vital forms of curriculum animation with a lifeless curriculum project.

Animation comes from the Latin word animare, meaning to give life to. The modern connotation of animation suggests animated cartoons, or a sense of bringing something inanimate to life. Similarly, a curriculum is only a representation of reality, but it can take on a vitality that seems alive. Langer (1953) described good art as "vital" and bad art as "lifeless." The presumption, therefore, is that curriculum planning can become an art form and that good curriculum is animated, while bad curriculum is lifeless. (Gose, 2005, p. 55)

With this challenge in mind, act three of curriculum scholarship in preparation for this study required consideration of variables that may impact faculty member engagement levels by reviewing: 1) instructor quality demands of intended curriculum, 2) emerging ideas on the role of information technology in curriculum representation, and 3) insights from prior mapping studies highlighting faculty engagement considerations.
Faculty member quality demands of intended curriculum.

Teachers hold specific quality expectations with regard to their intended curriculum. These expectations extend to related curriculum forms such as curriculum maps. In a study of German teachers’ uses of written curriculum, Abs (2004) identified a list of “quality demands for well-designed curricula from a teacher’s perspective” (p. 216). Table 3 identifies these demands as the need for legitimization, coherence, intelligibility, acknowledgement of time factors, and psychological alignment with development readiness. The items are problematized into questions in column two of Table 3 to demonstrate the assessment that occurs when reviewing a curriculum initiative or document.

<table>
<thead>
<tr>
<th>Quality Dimension</th>
<th>Problematized Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legitimization</td>
<td>Are there clear normative guidelines (educative tasks)?</td>
</tr>
<tr>
<td></td>
<td>Are the rationales for tasks included?</td>
</tr>
<tr>
<td>Coherence</td>
<td>Are there connections of content within a subject?</td>
</tr>
<tr>
<td></td>
<td>Are there connections of contents between subjects?</td>
</tr>
<tr>
<td>Intelligibility</td>
<td>Are learning objectives precise?</td>
</tr>
<tr>
<td></td>
<td>Is there sufficient learning objectives and content?</td>
</tr>
<tr>
<td>Time</td>
<td>Is there a well-balanced calculation of time represented?</td>
</tr>
<tr>
<td></td>
<td>Is the time for compulsory content minimized?</td>
</tr>
<tr>
<td>Psychological</td>
<td>Are the objectives, materials, and tasks developmentally appropriate?</td>
</tr>
<tr>
<td></td>
<td>Does the curriculum affiliate with the experience of pupils?</td>
</tr>
</tbody>
</table>

Where Abs (2004) is silent is on the role of teachers in creating the curriculum and ultimately their taking responsibility for the quality. Specifically, Abs studied ‘received’ curriculum. Mapping is in part curriculum creation. What role does coherence, intelligibility, and psychological alignment play while
distributing competencies across a course sequence and dressing those competencies in local teaching and learning experiences? With respect to the DCAS, mapping creates an opportunity to move the responsibility for the curriculum from the external creators to the department level actors. From this perspective, quality may be judged when curriculum is received (Abs, 2004); however quality may also be created when curriculum is mapped. Coherence, intelligibility, time considerations, and psychological factors become labels for understanding the decisions faculty members make while constructing course sequences, determining placement of outcomes, and selecting instructional and assessment methods represented on/in a map.

When a curriculum is fully imagined from within a program, as was the case with the Sport Science Signature (SSS), there exists a reversal in the need for legitimization as described by Abs (2004). An ‘inside out’ as opposed to an ‘outside in’ need for legitimization exists. From this perspective, maps representing the quality demands of faculty members may also serve as legitimization tools for articulating or describing the curriculum to outsiders.

In light of the shifting context of undergraduate post-secondary institutions described in Chapter 1, it is noteworthy that institutions as a whole may be seeking legitimization through curriculum actions that adhere to normative trends by increasingly embedding certifications and outside qualifications into degree structures. The Bachelor of PE and Coaching (BPEC) is no exception to this trend. In the BPEC curriculum, external requirements include the DCAS, the SSS, the National Coaching and Certification Program (NCCP) curriculum, the
British Columbia Parks and Recreation Association (BCRPA) curriculum for fitness theory certification, and High Five certification in the principles of healthy child development. Ironically, the trend may backfire when it comes to implementation of external competencies if the adopted curricula are seen as delegitimizing to existing standards in a program.

Using Schwier, Campbell, and Kenny’s (2007) curriculum agency theory, which is discussed in detail in Chapter 3, comparisons to standards may occur during assessment of curriculum initiatives in disciplinary dimensions, interpersonal dimensions, or in light of institutional mandates and societal standards for graduates. From this perspective, the need for legitimization in the eyes of normative public standards may rub against the disciplinary standards held by faculty. Alternatively, the need for legitimization may lead to a strong sense of alignment leading to a belief that the curriculum in question contributes to becoming an ‘educated graduate’ of the program. The need for legitimization, therefore, may work for or against strong agency and ultimately the animation (Gose, 2005) of a curriculum in the classroom.

When individual legitimization needs are shared across group members, or individuals with similar legitimization needs come together, the group begins to resemble a public sphere as described by Habermas (1996). Public sphere are discursive communities with an openness to critical rational debate and the problematization of new issues. When a community founded on public sphere conditions comes to mutual agreement, the resultant communicative acts are said to be powerful and represent the current understanding, values, and beliefs
of the group members. The communicative actions of an educationally situated public sphere may take the form of adopting new curriculum and adjusting teaching practices, or alternatively, resisting curriculum change. In this regard, the process of mapping must be open to the fact that external curricula, such as the DCAS, NCCP certifications, BCRPA certifications, or High Five certifications, run the risk of being perceived as a delegitimizing influence on a program. If the process values or promotes curriculum against faculty wishes, engagement will be at risk.

Remembering that faculty engagement in the mapping process is deemed necessary to reach the aims of this study, the process of mapping should factor in the time and space for faculty discussion of standards, ideal graduates, and quality curriculum. By attempting to bring to light these dimensions of the process, the facilitator will have more opportunity to foster discussion that will reveal faculty members’ ‘beliefs and values’. A prescriptive process would be incongruent with these insights. With respect to the connection between community, curriculum and the need to represent local quality considerations, this study adopted a participatory action research methodology (Kemmis and McTaggart, 2004) grounded in Habermas’ (1996) ideas about public spheres and communicative action. Habermas’ work provides a framework for understanding some of the sociological characteristics around which working groups form and act, while Abs’ study (2004) reminds us that groups need their artefacts (curriculum documents) to represent their local quality demands, including any
normative considerations relating to legitimization they have embedded in their program structure and curriculum choices.

**Information management considerations of mapping.**

It is a fair and worthwhile question to ask at this point: “What problem(s) is curriculum mapping solving for faculty members?” Beyond the possibility that curriculum mapping may be used to identify and foster specific quality considerations of curriculum (Abs, 2004) and be useful for external legitimization purposes, an additional benefit of curriculum mapping is the capturing, storing, and organizing of large amounts of curriculum-related information. Curriculum mapping holds out the promise of organizing enormous amounts of curriculum-related information using relational databases and presenting that information in useful ways. In a four-year degree, such as the Bachelor of Physical Education and Coaching (BPEC), the level of curriculum complexity is too great for any individual to contain and organize, therefore it was hypothesized that faculty members would benefit from an information architecture for understanding their curriculum landscape and making curriculum-related decisions. The glut of curriculum information in the BPEC stems from the breadth and depth of material covered over 4 years and the program’s ambitions to meet both academic and applied ends while maintaining curriculum articulation with the previously described five external curriculum frameworks or certifications. To demonstrate the complexity, consider that an instructor or coordinator in the BPEC program wishing to make a significant course change needs to know how that change will impact the DCAS, SSS, the High Five, BCRPA, and NCCP certifications. Without
analytical curriculum tools this level of complexity is potentially paralyzing when it comes to attempts to reconsider course content, learning activities, or graduation requirements.

Other researchers such as, Miller, Koyanagi, and Morgan (2005) have embraced software for organizing curriculum development and structuring discourse to some success. However the limitations of technology in keeping up with our desires appear ever-present. When considering a mapping process from the perspective of information management, the issues of information collection, storage, retrieval and representation, interface and software considerations become an additional quality demand held by teachers. Cornu (2004) argues that “knowledge is no longer organized in a chain form (the one who knows teaches the one who does not know, who then can know and teach, etc.) It is now a network process, and everyone, the teacher as well as the learner, is equally involved in the network” (p. 227). The role of information technology in this instructional network is to enable new insight from existing information and expand networks as new information comes available. Curriculum developed using technology with social construction dimensions shifts from the use of technology as a storage and transmission medium to using it for social reconstruction and transformative purposes (Eisner, 1997). An emergent criterion for a successful mapping is thus the ability to use the maps to traverse curriculum connections in non-linear ways. Information must be hyper-linked, drillable, visual, and presented in a networked form. In addition to the information architecture meeting group demands, co-construction of the network is an
important second criterion related directly to engagement of faculty members. Cornu (2004) suggests that information and communication technologies such as curriculum maps can enhance “collective intelligence.” Through these tools, individual knowledge is leveraged in the “collective dimension” (p. 228).

Our digital expectations of networked information emerge from both our recent experience with similar technologies and our evaluation of the technology against the requirements of personal use. People have varying thresholds of digital patience for learning new software. What is intuitive to one may be complex to another. Our personal digital expectations become an additional area of assessment in determining the quality of curriculum in question. Put simply, easy to use interfaces from a faculty perspective may foster engagement, or at least not undermine it. From this perspective, curriculum maps (networked views of curriculum) must, at the very least, be easily navigable and come close to the digital interface expectations of users.

Co-construction and creativity in this networked view of curriculum takes the form of adding new information to the network, recognizing new connections between material, re-ordering experiences and outcomes, and/or recognizing the redundancies and outliers in the information and addressing them. These acts attempt to better order our curriculum world and create representations that most accurately account for the intentions embedded in a program of study. According to Dijkstra (2004), “human beings are prepared for regularity. They explore the outside world and try to bring order into the chaos of reality” (p. 155). Information technology and the associated quality criteria of social and communicative
networks are servants of this cause. The risk, as with all technological innovation, is that if technology becomes the cause, then we transgress from being ‘tool users’ to simply ‘technophiles’ (Postman, 1992).

**Beware of the technical fix.**

On a cautionary note, Welner and Oaks (2008), warn of “the appeal of the technical fix” for solving curriculum-related problems. In this case, the problem that curriculum thinkers face is the glut of information, desired outcomes and competing intentions in an undergraduate curriculum. Additional complications to the process come in the form of non-linear sequencing of courses in an educational program and inter-institutional transfer between programs. To suggest that a well-conceived mapping process is guaranteed to simplify the faculty members’ curriculum-related lifeworld is an over-simplification. Indeed, curriculum mapping may actually expose unnecessary and distracting complexity to members of a community who were peacefully focused on their respective roles. Furthermore, energy required to map curriculum should be additive to the overall aims of a program in that it fuels curriculum improvement as opposed to fostering any feelings of overload or time lost.

This study represents an exploratory research and curriculum representation project using previously un-documented tools in the literature (see Chapter 4 for a full project description). With this in mind, the aim of this study is to gather feedback not only on the facilitation process used to undergo the mapping, but also on the information management tools chosen for collecting, analysing, and representing the curriculum data. Two strategies were employed
in this study to minimize the technophilic risks relating to an honest analysis of the software chosen for this study. The first strategy was for myself as researcher to adhere to what Curzon-Hobson (2003) calls a critical stance from which one can question the assumptions and power relations embedded in an argument (or use of technological tool in this case). The second strategy was to purposefully place the heaviest technology burden on the facilitator in an attempt to remove faculty members from the tedium of learning the software preparation and back-end database details. These actions were taken in an attempt to avoid overwhelming faculty members with technical detail and keep the research focus on investigating what faculty member deem to be the meaningful outcomes and qualities of a technology-assisted mapping experience. In short, the mantra “beware the technical fix” became an ever-present reminder for me as researcher that technology may be necessary for social reconstruction of complicated curricula and programs; but it should always remain a tool, not the purpose of the study.

**Comparative studies in mapping.**

The final act of curriculum scholarship in this chapter involves reviewing how others have utilized mapping to explore their curricula while managing to foster faculty engagement throughout the process. Gleaned from the attempts of others, clear recommendations and insight into the dimensions of mapping projects that contribute to collegiality and investment in the process are discussed below.
The goals of mapping projects and the contexts in which they are situated play significant roles in the self-assessments made by authors regarding the success of their projects. Applied professional programs, para-professional programs, and industry programs have been negotiating issues associated with external accreditation and curriculum expectations longer and in more detail than programs educating in academic/disciplinary traditions. As a result, mapping is more commonly used in situations where accountability and articulation with outside agencies is required to meet standards for employment or industry certification (for examples see: Bartoo, 2008; Burtscher, Pasqualoni & Scott, 2006; Deets, 2000, Wachtler & Troein, 2003).

Wachtler & Troein’s (2003) mapping project took place in a medical program at Lund University. Their goal was to assess where cultural sensitivity training and competency-related outcomes existed within the program. Their study looked at a single competency in depth. They triangulated their findings by 1) assessing the intended curriculum in the form of course outlines and objectives, 2) investigating the taught curriculum by interviewing program coordinators, instructors and tutors, and 3) exposing the experienced curriculum, or what they termed the ‘received curriculum’, by interviewing students. They found great variation across the three perspectives regarding where cultural sensitivity outcomes and training occurred throughout their program. Their ultimate recommendation was for increased alignment of the intended, taught, and received curricula, although they were largely silent with regard to a suggested process for achieving their goal. The Wachtler & Troein (2003) study
is an example of the transactional view of curriculum (Eisner, 1979) and represents pragmatic and de-politicized concerns. They employ triangulation and well grounded methods to identify the presence and local interpretations of a competency; however they do not extend themselves into any issues of contention and controversy that arose because of the inquiry, nor do they identify any reasons for inclusion or omission of the competency.

In contrast to Wachtler and Troein’s apolitical description of their mapping study, Sumison & Goodfellow (2004) conducted their exploratory mapping project while maintaining a critical stance (Curzon-Hobson, 2003). Their aim was to “identify generic skills currently fostered in the program, and those that appear to be overlooked” (p. 329). It is their identification of “those that appear to be overlooked” that affords them recognition as being more critical and open to their emergent findings than Wachtler and Troein (2003). Similar to this study, Sumison & Goodfellow (2004) were interested in mapping multiple competencies in a single project. Their study took place in a Bachelor of Education (Early Childhood) program and their results provide a forthright look into their experience with mapping as a process full of both potential gains and pitfalls. Similar to De La Harpe & Radloff (2000), they found ‘top-down’ approaches, time demands, lack of commitment by some staff, feelings of inadequacy and in some cases an overall lack of enthusiasm for engaging in professional development experiences, to be barriers to a successful project (Sumison & Goodfellow, 2004, p. 330). They also argued that generic skills, such as those described in the
Douglas College Academic Signature (DCAS), can be difficult to translate across disciplines for some faculty members.

The curriculum data that Sumsion & Goodfellow (2004) collected used a paper-based version of mapping that required faculty members to fill out detailed grids assessing whether or not generic skills were present in a course and report on their level of sophistication. This process represented a self-reporting of the taught curriculum. Their study was an attempt to ‘quantify’ the instances and occurrences of instruction against the generic skills of interest. They describe their approach as:

less successful than we would have hoped in quantitatively mapping the fostering of generic skills and qualities within the curriculum. Nevertheless, the exercise was extremely beneficial in terms of promoting reflection and dialogue amongst our colleagues about which generic skills and qualities we want to promote and how we might go about doing so. (p. 345).

Their study demonstrates the importance of agreement on the ‘generic skills and qualities’ desired in a program before attempting to map the skills and qualities. Pre-agreement on the definitions and desirability of meta-curricular items appears somewhat obvious in hindsight, although that oversight may be a function of the mandating of an external curriculum or the assumed worth of the meta-curriculum by the facilitator(s). The identified need by Sumsion and Goodfellow (2004) for local acceptance of external outcomes and their recognition of faculty members’ desire to engage in the discussion and reflection needed to reach a shared understanding is an endorsement of the professional and community development potential of mapping. To find success in the project,
yet difficulty with the actual data collected, suggests that there is more going on during the mapping process than the simple recording of curriculum data. It suggests that dialogue and engagement within a curriculum community around competency-based intentions has benefit beyond the reach of the curriculum quantification methods used by both Sumsion & Goodfellow (2004) and Wachtler & Troein (2003). That is to say, filling out checklists with numbers representing sophistication of a generic concept or skill may represent a version of ‘curriculum data’ that is less important than the influence of the process on the faculty members involved.

These researchers’ experiences inform this study by highlighting the importance of moving from an accounting view of competencies to mapping processes that encourage faculty dialogue and engagement. A successful mapping process must allow time and space for dialogue, provide opportunity for faculty members to use discipline-based examples, and localize the curriculum by employing contextually relevant language. Their work warns us that when conceived as a quantitative and technical process resembling the taking of inventory, mapping may renege on its promise of representing what actually occurs in a program. On the other hand, when considered as part of a larger curriculum and professional development processes, its potential may be more fully realized.

Mapping as a collaborative tool and community builder lies in stark contrast to its mechanical use as an accountability measure or inventory tool. Uchiyama and Radin’s (2009) article titled “Curriculum mapping in higher
education: A vehicle for collaboration,” explores the collaborative dimensions of a mapping project undertaken in an education department with eleven faculty members. They chose to map their curriculum through a reflective process by recording what was taught on the day it was taught. A subtext to their project was the presence of an external requirement to articulate recently developed external education standards called the Information-Based Educational Practices (IBEP) within their Teacher Licensure program curriculum. Uchiyama and Radin (2009) acknowledge the role of Teacher Licensure in their findings, but also admit surprise at the collegiality that resulted from their 2-year process.

Although the original intent of curriculum mapping was to align the Licensure coursework with the state standards, we were surprised by the unexpected finding – that the curriculum mapping process fostered increased collegiality and collaboration among the 11 participating faculty members. These faculty members became more energized and engaged with colleagues, mitigating the isolation often felt by many in higher education. (p. 277)

Sumsion and Goodfellow (2004) and Uchiyama and Radin (2009) had differing goals at their outset, used different methodologies for their research, and yet both still reported significant collaborative and social findings related to the mapping process. Both sets of authors reported surprise at the level of dialogue, reflection, and collegiality that occurred during and after their mapping projects. The common findings of the researchers may be attributable in part to the following shared project characteristics:

Both projects:
- reached agreement in principle for their projects from colleagues before applying for grants,
• had facilitators that were well versed in the generic skills, standards, and local curriculum,
• allotted time for group discussion of generic skills or external standards
• allowed for adjustment in the mapping process as it became clear what was working and not working, and
• were dealing with external curriculum that created the possibility of a perceived legitimization deficit.

These considerations overlap with recommendations made by Wolf (2007) in his description of considerations for fostering an impactful curriculum development process:

1. Start with at least one faculty “champion” …

2. Engage a curriculum facilitator or educational developer …

3. Ensure that the process stays on track and moves forward …

4. Use data as a foundation for development …

5. Engage curriculum development as a continuous improvement process (Wolf, 2008, p. 19-20)

The recommendation by Wolf (2008) to “use data as a foundation for development …” (item #4) requires deeper consideration than the motivational and procedural elements in his list. As Sumson and Goodfellow’s (2004) experienced, curriculum data can become too leveraged from experience, resulting in a disconnection between the data and actual teaching or learning experiences. They “had intended to undertake a quantitative analysis of the placement of ticks [on the student learning profiles]. It soon became apparent, however, that these were not a reliable indicator of whether and/or how generic
skills and qualities were promoted within each of the 35 units included in the mapping exercise” (p. 337). When taken one step too far, reduction may cause the data to no longer represent faculty members’ actual life-worlds. When this risk becomes reality, faculty member engagement with the process may also falter due to their quality assessment (Abs, 2004) of the curriculum project.

Uchiyama and Radin’s study (2009) provides an alternative to the quantitative accounting of competencies by utilizing a qualitative action research approach. They conducted interviews, surveys, and observations keeping their attention on both the qualities of the curriculum mapping process and the underlying standards and curriculum being mapped. What cannot be answered by comparing Sumsion and Goodfellow (2004) with Uchiyama and Radin (2009) is whether more discussion and reflection in the Sumsion and Goodfellow (2004) project before trying to quantify instances of generic skills and qualities might have led to more reliable representations of what was occurring in their program. Uchiyama and Radin’s (2009) inclusion of ample time and space for faculty input represents an acknowledgement of the communal and local considerations of curriculum development processes. This is echoed in the curriculum development model employed by the TSS department at Guelph University (see Figure 5), which sees mapping as only part of an overall development process and suggests that an engaging curriculum review and development process can drive curriculum initiatives for up to 3-years (Wolf, 2008).

Finally, the need to respond to a perceived or real legitimization deficit is a shared characteristic of Sumsion and Goodfellow’s (2004) and Uchiyama and
Radin’s (2009) study contexts. Neither study, however, addresses the role of external legitimization concerns in promoting faculty engagement in curriculum processes or its role in developing cohesion within a group. The need for legitimization is a primary consideration of Habermas (1996) in the development of public spheres and formation of their communicative acts. In curriculum specific literature, Abs (2004) identified legitimization concerns as a dimension of quality determination used by teachers while assessing an intended curriculum. To address the role of public sphere characteristics embedded in a mapping project, such as, cohesion, legitimization, communication patterns, etc., and the role of normative considerations expressed as curriculum legitimization concerns, this study adopted a participatory action research methodology (Kemmis & McTaggart, 2005) based on Habermasian (1962, 1989, 1996) theories of public spheres and communicative action.

This chapter set out to situate the study of mapping in the broader field of curriculum study, discuss literature on the practices of social curriculum development using technology, namely curriculum mapping, and prepare the reader for discussing the following concerns in subsequent chapters:

1. How might we need to understand faculty agency to articulate the interaction of a mapping process and curriculum-related agency? (see Chapter 3, Faculty Member Agency)

2. How did the practitioner nature of this inquiry and the lessons from others such as Wolf (2008), Sumsion & Goodfellow (2004), and Uchiyama and Radin (2009) inform the design characteristics of the
mapping project and the research study? (see Chapter 4, Research Methodology)

As a prelude to Chapter 4, the relevant literature concerning curriculum mapping and faculty engagement make it clear that mapping practices should attempt to a) meet the quality demands of teachers relating to their curriculum concerns (Abs, 2004), b) attempt to address the technological considerations and limitations involved in representing curriculum-related information (Cornu, 2004), and c) not shy away from the more difficult discussions about curriculum competencies, such as, what is and is not included in the discussion (Sumsion & Goodfellow, 2004)? From these pre-requisites for a successful mapping endeavour, sterilized forms of mapping, or purely quantitative methods of mapping, would not be sufficient. The literature was unanimous in its conclusion that time and space for dialogue about competencies, local curriculum, and pedagogy is an essential feature of successful socially reconstructive curriculum development. Furthermore, when personal and possibly program transformation is a desired outcome (i.e. transformation), the development process should be open to change as the individuals within change. The process must resemble an organic or evolutionary process as opposed to a mechanist or prescriptive process. The action-based research methodology chosen to meet the demands set out in this chapter are discussed further in Chapter 4: Research Methodology after the Chapter 3 discussion on how to conceptualize faculty member agency.
Chapter 3: Faculty Member Agency

*It is easier to adopt a decision than to put it into practice, and it is easier to make changes in structure than to reculture, which gets at the heart of behaviour and beliefs (Fullan 2008, p. 115)*

Making curriculum-related decisions and acting on curriculum-related intentions are expressions of faculty member agency. Of particular interest to this study are curriculum-related decisions that result from an assessment of available options based on personal beliefs expressed as values, knowledge and understanding. Curriculum-related agency of this nature is a situated construct residing in political, interpersonal, and informational environments that both enable and restrict curriculum development and implementation.

Drawing on Taylor (1962), Alexander (2005) describes the ability to choose one’s beliefs, desires and actions as self-determination. Self-determination in partnership with self-expression and strong evaluation are three central principles of human agency. Self-expression describes acting in accordance with one’s beliefs and values and is dependent on moral intelligence and reasoning. More specifically, “for a person to be able to exercise autonomy she must be able to ground her choices in some sort of reasoning or understanding; otherwise her choices would not actually be hers, but rather a product of caprice” (p. 345). Alexander also argues that for self-expression to have meaning, one’s values must be strong and thereby lead to strong
evaluation of available options. By reversing the description, we can see that when faced with a choice, strong values lead to strong evaluation and the choice to act is self-expression exercised during a moment of self-determination.

Due to the complex and situated nature of curriculum-related agency, studying it requires distilling the concept into digestible components without losing the overall essence of agency and its action-oriented roots. From a behavioural perspective, curriculum-related agency in a study on curriculum mapping could be observable as both an investment in the mapping process and in the form of curriculum change. Unfortunately, observation of behaviour alone is too limiting and possibly even misleading. Curriculum change due to interpersonal pressure or policy does not equate to change that springs from a confluence of understanding, belief expressed as values, and an evaluation of available options. Under this definition of agency, an agent’s actual and perceived curriculum and pedagogical freedom are also necessary considerations for an inquiry of this nature. In order to prepare the ground for the methodological choices of this study and the discussions that follow, the remainder of this Chapter explores 1) the relevant characteristics of an environment for strong assessment, 2) the role of understanding in strong assessment, 3) the role of beliefs and values in strong assessment, and 4) the role of analogic and metaphoric thinking in shaping both understandings and beliefs.
Curriculum-related Agency

Faculty agency is a contextualized form of human agency situated in post-secondary institutions. Although agency is conceptualized as an individual trait, curriculum design in general and deployment of curriculum themes and competencies, more specifically, reside at the centre of a set of overlapping learning and teaching communities comprised of multiple agents (students, instructors, staff, administrators, external stake-holders, and government officials). Studying agency, therefore, requires consideration of the interplay between faculty members, their multiple commitments, and the environment in which they work. Based on their work using multiple case studies and narrative inquiry methods to study agency and instructional design, Schwier, Campbell & Kenny (2007) have constructed a model for understanding faculty member agency by considering four domains of assessment that can occur when making curriculum-related decisions. The four domains are described below:

Interpersonal agency is characterized by the moral commitment made by instructional designers to the other people involved in projects and it is, at least, bi-directional and directed to clients and to learners who will eventually experience the product directly. (p. 6)

Professional agency is characterized by a feeling of responsibility to the profession and the ID [Instructional Design] community of practice to do instructional design well and to be acting in a professionally competent manner. (p. 7)

Institutional agency includes responsibility felt by instructional designers to advance the agenda of the host institution. If universities, for example, are promoting a teacher-scholar model, then instructional designers may emphasize activities that tie the research programs of faculty to their teaching. (p. 8)

Societal agency is characterized by a need to see beyond the confines of immediate work, and to know that the work of instructional design is contributing to a larger, more significant societal influence. (p. 9)
In order to generalize Schwier et. al.’s (2007) model of agency from instructional designers to faculty members, one must accept that all faculty members involved in a program with meta-curriculum themes and related competencies are at some level curriculum designers who are able to make choices about what is worth teaching and how to do it. Furthermore, to exercise strong agency requires free will and, therefore, the environment within which they work according to this model must have limited punitive measures for non-compliance to institutional, professional, and interpersonal commitments. A significant criterion for situating the potential for strong assessment in a curriculum environment is whether or not the environment can be characterized as having high levels of instructor autonomy and perceived freedoms. Within such an environment, levels of curriculum-related understanding, personal beliefs, and moral commitments matter.

Values, Assessment, and Strong Evaluation

Each domain of agency described by Schwier et. al. (2007) carries with it a moral commitment by the faculty member. Moral commitments can range from strong to indifferent. According to Schwier et. al.’s model, the strength of curriculum-related agency resides in the degree of convergence between the four domains of agency during a faculty member’s evaluation of a curriculum initiative. In other words, agency is at its most powerful when built upon a foundation of moral coherence between the domains. Moral coherence occurs when assessment of a curriculum option leads to minimal tension between the interpersonal, institutional, professional/disciplinary and societal domains of
agency. Agency is considered weak by Schwier et. al. when there is tension between a few or all of these domains of agency. Figure 6 provides a visual representation of Schwier et. al.’s concepts of weak and strong agency and moral coherence.

Figure 6. Visual Representation of I) Weak and II) Strong Agency Based on Moral Coherence Model (Schwier, Campbell, and Kenny, 2007)

To illustrate the role of coherence and tension in the Schwier et al. (2007) model, one can imagine a department that rejects thematic curriculum and core competencies such as the Douglas College Academic Signature (DCAS). The overriding reasons may be many, but let us assume it was the predominance of an academic rationalist belief in discipline-based knowledge and inquiry. Within this department, it is also possible to imagine individuals who believe that the adoption of thematic curriculum and inter-disciplinary initiatives better represents the way people learn and transfer knowledge. An initiative such as the DCAS aligns with understanding and belief about how knowledge is constructed and
ultimately embodied by students. For instructors working with a reasonable amount of perceived freedom with regard to their curriculum and pedagogy, this situation represents tension between interpersonal, institutional, professional and societal domains of agency. The ensuing choices made by faculty members to support, ignore or even subvert an initiative such as the DCAS becomes a prioritizing choice for the faculty member when considered through Alexander’s (2005) criterion for agency and the role of strong evaluation. The action chosen values one set of beliefs over others.

This description of prioritizing choices represents a theoretical difference between what Schwier et. al. (2007) call strong agency and what Alexander (2005) calls strong evaluation. When moral coherence is lacking across the domains of agency, Schwier et. al. conclude the result is weak agency. However, the tension caused by conflicting intentions layered onto a curriculum from institutional, societal, professional/disciplinary and interpersonal perspectives may lead to what Alexander (2005) calls strong evaluation due to the need to evaluate alternatives and ultimately to choose both an affiliation and action for oneself.

Schwier et. al.’s (2007) characterization of agency as strong or weak, depending on moral coherence, has a strong normative suggestion that cannot be ignored. What their model highlights most clearly is that reproductive actions made by cohesive groups that are widely acceptable to an institution and society most likely come easier than decisions born from tension and possible resistance to widely held beliefs and values. Their model does not preclude going against
the norms and values represented in the interpersonal, professional, institutional and societal domains; however, they undermine the power of a rational choice born from this tension by labelling it weak agency. In contrast, Alexander’s (2005) model considers an action born out of rational decision making to be strong agency based on strong evaluation (Alexander, 2005) whether there is tension among the four domains or not.

In spite of its normative and conceptual weaknesses, the Schwier et. al. (2007) model has a particular utility to the study of faculty member agency due to its deconstruction of agency into domains relating to the context in which faculty agency is situated. Changing Schwier et. al. ‘domains of agency’ to ‘domains of assessment’ allows a re-connection of Schwier et. al.’s (2007) instructional design work to Alexander’s (2005) theorizing on curriculum and agency. In this re-conception, the domains outlined by Schwier et. al. remain useful for reviewing a curriculum initiative, by allowing an investigator to unpack the considerations that influence a faculty member’s decision to act.

Table 4 uses a set of questions relevant to faculty members making curriculum implementation decisions by problematizing the ‘domains of assessment’ to demonstrate how ‘strong evaluation’ (Alexander, 2005) is informed by specific kinds of understanding and value assessments. The background questions presented in column two represent the need for an individual to “ground her choices in some sort of reasoning or understanding” (Alexander, 2005, p. 345). The assessment questions help to determine moral coherence and the potential contribution the domain will have to overall agency.
The breadth of considerations presented in Table 4 demonstrates the complex nature of curriculum-related agency and the possibility of conflicting value assessments by faculty members who are forced to choose among competing value alternatives.
Table 4. Domains of Curriculum Assessment: Background and Value Assessments

<table>
<thead>
<tr>
<th>Domain</th>
<th>Reflective and analytic questions leading to a value-based ‘strong assessment’</th>
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</table>
| Interpersonal | **Background questions:**  
What are my colleagues’ beliefs about the curriculum in question?  
What is my obligation to students with respect to the curriculum and their learning?  
**Assessment questions:**  
What are the perceived risks and benefits to my relationships if I support the proposed curriculum changes? |
| Professional | **Background questions:**  
What is my orientation to curriculum implementation?  
What epistemological belief(s) do I hold? (E.g. empiricism, positivism, structuralist, post-structuralist, etc.)  
What theories of learning inform my beliefs and practice?  
What sociopolitical orientations do I hold? (e.g. critical theory, feminism, post-modernism, etc.)  
**Assessment questions:**  
Does the conceptualization and implementation of the curriculum theme align with my professional theoretical positions and ethics? Where I perceive conflict, which theories do I prioritize? How does this prioritization inform my commitment to different theories? |
| Institutional | **Background questions:**  
What is the educational mandate of my institution?  
What is my role in advancing the aims and mission of the institution?  
What is the institution’s orientation to curriculum being expressed by its actions?  
To what internal and external uses are curriculum themes being put? (internal examples: faculty control vs. education opportunity; external examples: marketing, public relations, academic transfer)  
What is my role in these other purposes being served by thematic curriculum?  
**Assessment questions:**  
Does my professional assessment of the merits of curricular themes align with the institutional uses of curricular themes? If they don’t align, is it an either/or situation or a both/and situation? (Said differently: Would supporting thematic curriculum compromise my professional and interpersonal values in any way?) |
| Societal | **Background questions:**  
What do I believe to be widely held purposes of education and more specifically undergraduate education?  
What do I believe to be widely-held perception of my institution’s role in society?  
What do I believe my role in promoting society’s vision of my institution and higher education to be?  
**Assessment questions:**  
Does the conception and implementation of the curriculum theme at hand align with my personal beliefs with respect to the purpose of education and undergraduate education? |
Schwier et. al.’s (2007) model presented visually in Figure 6 and then through a set of questions in Table 4 represents highly reflective and rationalized approaches to understanding agency (either as an observer of another’s reflection or during self-reflection). In Alexander’s (2005) description of agency, the understanding that he refers to as requisite knowledge for strong evaluation is reliant on a rational process to unpack, organize and ultimately utilize background information that leads to strong evaluation of curriculum-related alternatives.

**Curriculum-related Understanding**

Understanding of a topic, situation, or problem is a condition of determining whether a person’s actions represent agency or not (Alexander, 2005). When discussing faculty and curriculum-related agency, this understanding takes on specific dimensions. Faculty members, from this perspective must have an understanding of the program and institutional goals, interpersonal commitments, and the expectations of the professions and disciplines of relevance to their programs. In the case of the Bachelor of PE and Coaching (BPEC) program at Douglas College, the program goal is to graduate competent and reflective practitioners in the fields of physical education and coaching. The department goal is to be an institution of first choice in British Columbia for students considering studying physical education and coaching.

The institutional goals for the Douglas College Academic Signature (DCAS) can be understood as part of a cross-curricular initiative aimed at graduating students with self-awareness of their educational outcomes and related
competence. Beyond a general understanding of intentions embedded in each domain of assessment, a detailed understanding of curriculum components is required by faculty members if they are to assess each curriculum item for inclusion or exclusion. As faculty member’s knowledge of curriculum items moves from declarative to interpretive knowledge their level of understanding increases accordingly. Therefore, consideration of faculty members’ understanding of both the intention and content of a curriculum initiative emerges as a required component of studying curriculum-related agency.

Beyond the specific goals of an initiative, an understanding of a program’s curriculum landscape is also required for a strong assessment of any initiative. For example, choosing whether to include or exclude a DCAS curriculum competency in a particular course presupposes understanding of the course location in the overall program, the alignment with existing content, and the other possible experiences in the BPEC degree where the competency is already covered. This level of local curriculum understanding allows for a course-level testing of ideas, embeds student experience into curriculum-related decisions and keeps program goals, such as the professional expectations of graduates, in the discussion while considering the more detailed nuances of curriculum implementation. At an elemental level, an understanding of one’s course within a program landscape is requisite knowledge for a strong assessment of options required for strong agency when considering adding or removing meta-curricular components to a program.
Ford (1992), as described in Dijkstra (2004), outlines in his taxonomy of human goals the “sub-category of cognitive goals, which includes, among others; (a) exploration, (b) understanding, and (c) intellectual creativity” (p. 155). The Ford taxonomy provides a useful heuristic for understanding the drive to engage in work, such as a mapping project, that may lead to increased understanding. According to Dijkstra, humans develop increasing cognitive capacities due in part to their motivation to move from exploration to creativity. Through this lens, curriculum mapping is a process aimed at exploring and understanding the curriculum in an effort to foster creativity.

Dijkstra (2004) also suggests that “human beings are prepared for regularity. They explore the outside world and try to bring order into the chaos of reality” (p. 155). While this is not a particularly earth-shattering revelation in the face of modern, post-modern, or post-structuralist thinking, it does provide an important insight into how mapping is positioned in educational literature. Dijkstra relies on an essentialist argument to describe why we may be pre-wired with desire to engage in curriculum activities that attempt to ‘order the chaos’. Even though it may be a Pandoraic task to ‘order’ or ‘map’ something as complex as human learning and experience over a four year period, faculty members’ willingness to engage in the attempt is an expression of agency itself. This iterative spiral of agency and learning, according to theorists like Dijkstra (2004) is driven by our need for ever-increasing understanding in an effort to ultimately express creativity in our thinking and teaching. A primary question of this study is “Does the internal motivation to order and understand one’s life-world, coupled
with a specific curriculum mapping process, have an actual impact on faculty member curriculum-related understanding and agency or not?"

**Beliefs About Knowledge, Learning and Curriculum**

In keeping with Alexander’s (2005) description of agency as requiring understanding, beliefs expressed as values, strong evaluation and freedom to act, we now turn our attention to the role of beliefs concerning learning and knowledge that underpin curriculum initiative evaluations that are relevant to assessment of curriculum and the process of mapping. Curriculum implementation orientations (Fullan & Pomfret, 1977; Snyder, Bolin, & Zumwalt, 1992) provide a portal through which to view the potential impact different beliefs have on one’s preferences related to curriculum mapping and meta-curriculum. In other words, curriculum implementation orientations are representative of particular beliefs about learning and knowledge in their dispositional descriptions.

Researchers’ orientations to investigations in education have tracked the larger shifts in the natural sciences and wider society from being founded on the basis of “external assumptions” of reality to being founded on the basis of "internal assumptions" (Bredo, 2006). That is to say, the underlying belief in the nature of reality (ontology) has shifted from ‘reality as fixed and knowable through objective means’ to ‘reality as constructed’, at least partially, through discursive and historical influences. Guba and Lincoln (2005) think the scale of this shift is so big that they compare belief in objective views of knowing to belief in a flat earth:
We might predict that, if not in our lifetimes, at some later time the dualist idea of an objective reality suborned by limited human subjective realities will seem as quaint as flat earth theories do to us today. (p. 205)

For those studying curriculum implementation, the flat earth days were akin to the days when fidelity (Fullan & Pomfret, 1977) between intended curriculum outcomes and student representations of learning was achieved through prescribed, one-size fits all curriculum and pedagogy. While flat earth theorists may be hard to find, the same cannot be said for finding faculty members working from a fidelity orientation that is suggestive of an ontology grounded on 'dualist notions of objective reality (Guba and Lincoln, 2005). In addition to the definition of a fidelity approach to curriculum design and implementation, Table 5 provides definitions for mutual adaptation and curriculum enactment orientations to design and implementation.
Table 5. Curriculum Implementation Orientations

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Description</th>
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<tbody>
<tr>
<td>Mutual adaptation</td>
<td>The “approach whereby adjustments in a curriculum are made by curriculum developers and those who actually use it in the school or classroom context. This implies a certain amount of negotiation and flexibility on the part of both designers and practitioners” (Snyder, Bolin, &amp; Zumwalt, 1992, p. 410, in Pinar et. al., 1995, p. 700).</td>
</tr>
<tr>
<td>Fidelity approach</td>
<td>Under this mode of thinking content modules and standardized testing are considered tools to “measure the promise” the institution has made to the public in the form of its Academic Signature and core competencies. The use of the curriculum innovation and the achievement of desired results represent high fidelity (Fullan &amp; Pomfret, 1977).</td>
</tr>
<tr>
<td>Curriculum enactment</td>
<td>“Externally created curricular materials and programmed instructional strategies at the heart of the fidelity and mutual adaptation perspectives are seen as tools for students and teacher to use as they construct the enacted experience of the classroom” (Synder et. al, 1992, p. 418, in Pinar et. al., 1995, p. 701).</td>
</tr>
</tbody>
</table>

The mutual adaptation approach to curriculum design and implementation may be applied to situations that support internal and external constructions of reality; while the curriculum enactment orientation recognizes subjective influences in the construction of knowledge. The three orientations above provide a continuum of sorts by which to understand what faculty members may want from a curriculum initiative such as curriculum mapping. What is valued in a map by a faculty member working from an objective view of reality and a fidelity orientation may be more detailed and prescriptive than what might be valued by a faculty member working from mutually adaptive or enactment orientations.

To demonstrate how beliefs about learning and knowledge are embedded in one’s curriculum implementation orientation preferences, the example of the Douglas College Academic Signature (DCAS) is helpful. The institutional initiative describes a set of suggested outcomes. The DCAS does not have any specific pedagogical strategies or required assessment associated with the
competencies. As a result, it is difficult to argue that the institution has embedded a view of one fixed objective reality or any of the other characteristics that would support those preferring a fidelity orientation, such as, performance standards or standardized assessments. The DCAS exists in a fixed form at the institutional level making it difficult to argue that it is mutually adaptive at the departmental or class level. The competencies, if adopted, are not negotiable in their wording or meaning. The DCAS, on the other hand, is a curriculum initiative that is suggestive of outcome but requires local (course level) enactment by faculty members and students. For faculty members whose preference in curriculum represents a fidelity orientation, this situation may cause tension between the institutional beliefs and values about learning embedded in the initiative and the beliefs and values that the individual members hold. In contrast, for those faculty members who tend to prefer an enactment orientation, the lack of rigidity and openness to interpretation of the DCAS may create support for the initiative due to alignment of the embedded beliefs in the DCAS and their personal beliefs about learning and knowledge.

Mapping as an intermediate curriculum tool has the potential to support multiple orientations depending on the background policy and requirements of a program. Mapping of curriculum that is required by law, assessed, evaluated and reported externally will invoke different reactions than from internally driven mapping of curriculum, such as the DCAS and Sport Science Signature which represent goals and intentions more than requirements. The assessment of whether a mapping process aligns with one’s beliefs and values around learning
and knowledge will rely on the choice of what in a curriculum is mapped, the level of detail represented in maps, the decision regarding who constructs the maps, and the use of the map as a guide vs. requirement. Mapping perceived as aligned with one’s beliefs and values about learning and curriculum may support agency in the form of developing understanding, however mapping perceived as being in tension with one’s beliefs and values about learning and curriculum could be restrictive and detrimental to curriculum-related agency. The perception of curriculum mapping as emancipatory, restrictive, or both, is based on individual assessment that leads to evaluation.

This chapter has predominately discussed beliefs and values relating to curriculum and learning, however it is essential to remember that subjective views of reality, such as those represented by critical theorists, feminism, post-structuralism, academic rationalist, etc., have the potential to affect all assessments an individual makes of curriculum or instructional initiatives. For example, if one’s dominant lens of assessment of initiatives represents a critical theorists’ view, the primary question may consistently be: “Who gains from this initiative?” Criteria for evaluation from this perspective relate to social justice outcomes and emancipatory practices. The layering of beliefs is important if alignment of personal beliefs and values with beliefs embedded in curriculum initiatives is required for strong agency. The implicit argument here is that not all beliefs and values are equal in their impact on decision-making. When a strong-belief is consistently prioritized over the use of other criteria for assessing the merit of an initiative, the belief becomes a tint colouring all aspects of future
pedagogical assessments. To pursue the study of curriculum mapping without acknowledging the presence of individual epistemological and political tinting in their assessment process would be akin to returning us to the flat-earth notions of an objective curriculum reality. Maps and the curriculum landscapes they represent can only be seen through the eyes of those who view them, even though mapping is a conscious attempt to socially construct a curriculum framework meant to depict actual experience and desired outcomes.

**Perceived Freedom**

This chapter began by introducing Schwier et. al.’s (2007) domains of agency in order to provide an agency-related construct for situating curriculum-related decisions and assessments that lead to strong evaluation. In addition, beliefs and understanding related to curriculum implementation were organized into curriculum design and implementation orientations in order to demonstrate the role they play in assessment of curriculum initiatives and subsequent actions. Taken together, one’s beliefs and assessment of the institutional, professional/disciplinary, and societal intentions embedded in a curriculum create a sense of freedom to act that can only be described as ‘perceived’ when using a subjective view of reality.

The constraining and enabling factors to one’s perceived freedoms are personal constructs. Faculty members working from enactment orientations to curriculum implementation may perceive fewer constraints to their freedom than those working from fidelity orientations. The external curriculum requirements may be the same; however faculty members’ perceptions of freedom in their
classrooms to work with and interpret the material will differ according to ontological, epistemological, and learning theory orientations. Because of these differences, faculty members will perceive external curricula along a continuum that ranges from seeing new curriculum as an opportunity to be creative to it being an additional restraint on their freedom.

**Analogic Acts and Metaphoric Process**

*From time to time we glimpse a possible cognitive rearrangement of our world of meanings, or one of its fields of meanings, a rearrangement that might render our view of our world more comprehensible, more comprehensive.*

*(Gerhart & Russell, 2004, p. 16)*

At the root of understanding and beliefs are the cognitive processes we employ to interpret our world and experiences. Analogic acts and metaphoric process (Gerhart & Russell, 2004) are two descriptive terms for how we use existing experience and frameworks of understanding to interpret new knowledge and organize fields of meaning. Maps and mapping are components of a larger learning metaphor rooted in the link between travel and learning. Travelling language pervades educational language: students explore, discover, and journey, while teachers map, plan, guide and set milestones. Within this metaphor, maps are both a record of exploration and a tool for future travellers. As records of exploration, maps represent the possibility of discovery and the potential for internal constructions of knowledge and reality. As tools of reproduction, maps are rendered in the name of efficiency and represent external notions of knowledge and reality.
To demonstrate the connection between travel, learning, maps, and metaphorical process, it is helpful to recall Charles Darwin’s five-year journey aboard the H.M.S. Beagle in 1831 and his resultant evolutionary theories published in his book, *On the origins of the species*, that forever changed Western thought (Enright, 2009). FitzRoy, the captain of the H.M.S Beagle, used maps to guide their journey throughout the Galapagos Islands, while simultaneously Darwin busied himself exploring his geologic and biologic surround. His exploration, or education if you will, eventually led to a metaphorical shift in how humans perceive their origins. This shift from intelligent design and external origin myths to internal and organic metaphors for understanding our existence represents perhaps the greatest metaphorical shifts in the history of human thought.

Darwin’s work was the source of a cognitive disruption resulting in broad reconsideration of the knowledge and beliefs surrounding the origins of species and the nature of our existence. Gerhart and Russell (2004) explain that the use of metaphor can cause a “re-think” about one’s beliefs. They describe this cognitive moment as an “ontological flash” brought about by metaphorical process. An ontological flash is “an insight that a particular act of cognitive distortion made the world more understandable” (p. 15). Metaphor and analogy can be the source of cognitive distortion. This study is not intending to create a grand metaphorical shift, yet the fact that mapping can be situated in a travel and exploration metaphor may cause tension or disruption for those who hold their understanding and beliefs about knowledge and learning within a metaphor.
representative of competing ideas and beliefs. By exploring the metaphor, one may gain insight into the underlying beliefs people hold about knowledge, learning and undergraduate education in general.

Metaphoric process as described by Gerhart and Russell (2004) is a cognitive process involving the reforming of existing experience and knowledge into new combinations and structures using cognitive combination of elements that leads to higher understanding. The measurement of success of a metaphoric process is in the result. “If there is no improvement in our understanding, metaphoric process fails” (p. 16). As an acute example of the travel, learning and mapping connections that underpin educational language, Gerhart and Russell describe the internal fields of meaning that result after the necessary tension caused by new metaphors as being resolved in the creation of the “new topography” of the field. Darwin created an evolutionary topography within which the new knowledge and experience were organized. Metaphoric process according to this view has the ability to shift the foundational layer within a field of meaning; to shift the deep layer of understanding upon which subsequent knowledge is organized and networked.

In addition to large-scale disruptions that metaphoric thinking can cause, Gerhart and Russell (2004) describe an expansion of understanding in a field of meaning without significant disruption as an ‘analogic act’ (p. 24). Applying their categorization to this study, if the use of mapping and related travel metaphors to understand curriculum and student experience expands a faculty member’s understanding of the program without causing a significant challenge to the
underlying beliefs and understanding about learning and knowledge, then the process is not a metaphoric one, but is simply analogical. The two important considerations to Gerhart and Russell (2004) while differentiating analogic acts from metaphoric process are the individual's level of background knowledge (i.e. the current state of their field(s) of meaning under consideration) and the alignment of the metaphor or analogy with current beliefs and understanding(s).

Gerhart and Russell (2004) describe changes to a field of meaning (understanding and beliefs) as follows:

1. **New Knowledge—Adding to a Field of Meanings—A Cumulative Process.** First, we can imagine an increase in the number of concepts that make up a field. The additions might come at the edges of a field or as a filling in of an already established region. In either case we take a change of this kind to correspond to a basic learning process that results in an increase in what is known.

2. **New Understandings—Templates and Molds—Analogic Process.** … when a conception is not well known, it is not rigidly contained in a field—its relations with other concepts in a field are underdetermined, loose, or at least elastic. When we attempt to understand such a concept, we often say that it can be understood as being like some other well established concept in the field. In making the comparison we are asserting a kind of cognitive proportion between the known and unknown concepts and, since the new one is free to move, little if any cognitive tension is caused by the comparison. This process is analogical and the newly learned conceptual element takes on the shape of the known concept without strain.

3. **New Topography—Tectonic Change—Metaphoric Process.** Consider now the case of two concepts both firmly or rigidly embedded in a field of meanings. Here both concepts are known. Here each has well established relations with other “nearby” concepts, and the shape of this part of the field is understood. What happens, we ask, when we suddenly realize that one of those concepts is the same as the other? Bringing the two concepts together cognitively involves considerable intellectual stress and results in a distortion of the field, a distortion we understand as
metaphoric strain. Large cognitive forces come into play here because of the rigidity of the conceptual relations in the field of meanings. The effect of the metaphoric process is to achieve new understanding without the addition of any new concepts to a field. The newly shaped field constitutes a better construction of what we already know. (p.25)

The link between metaphoric process and agency (Alexander, 2005) is that they both require strong assessment. In the case of metaphoric process, disruptive examples must be reconciled in new forms of understanding. In the case of analogic acts, current metaphors are expanded to host new information. As viewed from within the agency framework, metaphoric process is more likely to challenge beliefs than analogic acts, while both analogic acts and metaphoric process are capable of contributing to new understanding. From this perspective, metaphor is not simply a pathway to cliché. By using metaphor to render the topography of a field of meaning, and subsequently exposing that metaphor to faculty members, the opportunity for disruption or evaluation of existing understanding and beliefs requiring strong assessment is created. The metaphors of travel and place that permeate curriculum mapping and education discussion in general are brought to the foreground in this study by a) acknowledging their presence, b) discussing their role in both understanding and beliefs, and c) engaging in curriculum process that embraces mapping as holding the potential for exploration of our curriculum life-world.
… in the postmodern moment, and in the wake of poststructuralism, the assumption that there is no single “truth”—that all truths are but partial truths; that the slippage between signifier and signified in linguistic and textual terms creates representations that are only and always shadows of the actual people, event, and places; that identities are fluid rather than fixed—leads us ineluctably toward the insight that there will be no single “conventional” paradigm to which all social scientists might ascribe in some common terms and with mutual understanding. (Guba & Lincoln, 2005, p. 202)

The Research Tradition: Practitioner Inquiry

This study meets Cochran-Smith and Donnell’s (2006) criteria for practitioner inquiry. “Practitioner inquiry refers to the array of educational research genres where the practitioner is the researcher, the professional context is the research site, and the practice itself is the focus of the study” (p. 503). I am the chair of the department involved in this study, curriculum development support is an important and recognized part of the chair role within Douglas College, and the practice of curriculum mapping and its impacts on faculty agency are the focus of this study. Cochran-Smith and Donnell delineate five forms of practitioner inquiry; action research, teacher research, self-study, the scholarship of teaching and learning, and using practice as a site for research (p. 504). Using Cochran-Smith and Donnell’s criteria, the “scholarship of curriculum practice” (Hubball and Gold, 2007) would be an additional form of practitioner
inquiry when the researcher is a participant in the curriculum practice under investigation. There are three identifiable layers of curriculum scholarship related to my role as practitioner in the study. As facilitator there is an investigation into considerations that promote high quality curriculum deliberations according to public sphere conditions (Habermas, 1962, 1989). As a participant/researcher in the social construction of curriculum in the form of maps using specific technologies, there is an investigation into the merits of the process as they relate to faculty goals and agency. Finally, as a curriculum theorist there is an investigation into the conceptual stack that was chosen to create the theoretical framework for the methodological choices made throughout this research project.

At the base of the conceptual stack that justified the methods and analysis of this project is an epistemological orientation towards knowledge that views inter-subjective agreement as a basis for reality. This view was captured in the opening quote of this chapter by Guba and Lincoln (2005) and also forms the basis for Habermas’ (1962, 1989) theories of public spheres and communicative speech acts. These concepts lead to the need for facilitation processes and technological choices that have specific potential to foster democratic forms of dialogue, rational debate, and capture the communicative acts of the curriculum community. By choosing facilitation techniques and a research orientation that are reliant on the same conceptual frameworks as the curriculum process employed for the project, an overall reduction in tensions between my roles of researcher, participant, and facilitator was hoped for.
Given the action-based nature of the curriculum mapping project at the core of this study, the fact that the process was new to all members of the department, including myself, and the study had an aim of creating a positive impact on faculty member curriculum-related agency, action research is an appropriate descriptor or categorizing this study within the field of practitioner inquiry. Action research is identified by Hubball & Gold (2007) and Cochran-Smith & Donnell (2006) as a desirable and valid method of inquiry into curriculum practices. Due to the facts that this was a workplace based study, curriculum mapping was new to the department, curriculum is value-based at its core, and as facilitator I had to take on an educative role, I sought a research method that acknowledged these characteristics, while also providing the lowest possible risk/return ratio (Paivi, Pelkonen & Pietila, 2004). The result was the adoption of a participatory action research (PAR) orientation wherein participants co-defined the goals, participated in trying to meet the goals, co-determined the success of the project, and established new goals for the project during the review of its success. “PAR is not a method of conducting research but rather an orientation to the research” (Khanlou and Peter, 2005, p. 2334). The methods of action research apply to the methods of PAR, however it is the critical stance of the researcher and the specific creation of spaces for the community to determine their own future that distinguishes PAR from action research.

A researcher using PAR and adopting a critical stance (Curzon-Hobson, 2003) “must be capable of ‘telling unwelcome truths’ against schooling in the interests of education” (Kemmis, 2006, p. 459). The potential unwelcome truths
of this study that I needed to hear, if they arose, relate to any potential failures of the mapping process under investigation and/or rejection of the meta-curriculum under review to contribute to the department’s educative goals or individual faculty member agency. Action research conducted solely into the efficacy of mapping without assessment of the underlying curriculum and power-relations across the curriculum would represent a failure to promote democracy and emancipatory thinking gained through critical rational debate. Emancipation in Kemmis’ (2006) view can be described as follows:

Some believe that the notion of education for emancipation is utopian. I believe emphatically that it is not utopian to hope for education that emancipates students, teachers and societies from irrational forms of thinking, unproductive ways of working, unsatisfying forms of life for teachers or students or their families, or from unjust forms of social relations in schools or societies. Notice that I do not say ‘emancipation from the established order’ or ‘hierarchy’ or ‘bureaucracy’ or from some specific institution. I am speaking about emancipation from irrationality … (p. 463)

Kemmis and McTaggart’s (2005) vision of PAR involves the researcher/participant also acting as a facilitator in an effort to “create forums in which people can join one another as coparticipants in the struggle to remake practices in which they interact, forums in which rationality and democracy can be pursued together without an artificial separation hostile to both” (p. 563). The following reflective learning spiral is typical of an action research process.

- planning a change
- acting and observing the process and consequences
- reflecting on these processes and consequences
- replanning
- acting and observing again
The relationship between faculty member agency and the research methodology in this study was of primary concern in light of the goals of this study. There was a conscious effort in the procedures described later in this chapter to create information transparency, foster debate, and create freedom to act in an effort to align the curriculum practice with Alexander’s (2005) theories of agency. Therefore, the mapping process and research goals had to be open to faculty input from the very beginning, resulting in the faculty members co-defining the project goals, work-flow, and ultimately judging our collective success. The alignment between agency theory and participatory action research is evident in Kemmis and McTaggart’s (2005) description of a successful research project and echoes the findings of the mapping projects conducted by Sumsion and Goodfellow (2004) and Uchiyama and Radin (2009) discussed in Chapter 2.

In reality the process is likely to be more fluid, open, and responsive [than simply planning, acting/observing, reflecting, replanning …]. The criterion of success is not whether participants have followed the steps faithfully but rather whether they have a strong and authentic sense of development and evolution in their practices, their understandings of their practices, and the situations in which they practice. (p. 563)

Furthermore, Kemmis and McTaggart (2005) are interested in the emancipatory potential of a research process that brings awareness to the social and political circumstances that give rise to our behaviours and their reproduction in habitualized forms. To be unaware of the commitments we are living and the habits that reproduce them is to live a form of domestication to the beliefs and ideas of others (Ruiz, 1997). Curriculum practice undertaken without reflection
and debate can take on the appearance of curriculum habits. Not to underestimate the power of breaking old habits, the emancipatory potential of a safe communicative space for rational debate allows member of a community to speak the uncomfortable truths that surround us:

If much action research leads to no bad news, no unwelcome truths, then it is unlikely to require of those who do it that they display the courage and conviction of the parrhesiastes [Greek speaker of unwelcome truth] – the obligation or duty to speak with the greatest courage and conviction we can muster when the time comes to speak honestly to the tyrant, the assembly, the head of the department or our friend. (Kemmis, 2006, p. 461, parenthesis and italics added)

A PAR orientation was chosen because it recognizes that given my position of power in this study, my educative interest in the topic, and my role in the study, I may be the tyrant, or head of the department Kemmis (2006) is referring to. Faculty members may perceive curriculum mapping and meta-curriculum investigations as external limitation to curriculum freedom, thereby, attaching my actions to the reduction of curriculum freedoms they may perceive. If both the research and the methodology live up to the emancipatory potential described by Kemmis (2006) and Habermas (1962, 1989), then the risk of negative outcomes may be reduced and replaced with the rewards of an energized and engaged workplace. Even if the mapping process is less than adequate, or if the meta-curriculum competencies in question are not fully integrated or adopted by the department, a PAR orientation recognizes that having faculty members be able to tell me when and why mapping did not work for them would be a measure of success in creating the discursive conditions necessary to demonstrate a positive influence on faculty member agency.
Limitations of Practitioner Inquiry and PAR

This study is a practitioner-based inquiry that uses qualitative means to capture the essence of a process and ruminate on philosophic implications. As a result, a methodological limitation of the study is that the findings are subject to local contextual factors as described in Chapter 1 and below in the Study Description. In order to make use of the results in another environment, the readers may safely generalize the theoretical ruminations (see Chapter 6); however, they may wish to exercise caution while making comparisons to their local context to determine the utility of the results and facilitation recommendations outlined in Chapters 5 and 7 respectively.

Kemmis and McTaggart’s critical theory and emancipatory orientation to participatory action research may leave the reader questioning whether the thematic curriculum and competencies at the core of this study represented political concern between faculty members and the institution. Curriculum at its core is a political endeavour and workplace-based inquiry must respect the political nature of the context, therefore, this study adopts the position that curriculum action based on individual and group agency is a form of social action. The creation of a communicative space to discuss curricula; therefore, is an attempt to bring social action in the form of curriculum action into the realm of the local faculty members of a department. In keeping with a Habermasian focus on democratic and participatory actions, this study held no fixed hypothesis at its outset with regard to what particular forms faculty member agency would take. As a result, the project of mapping the DCAS and Sport Science Signature (SSS)
represented an opportunity to explore the public sphere dimensions of the Sport Science department, the agency of its members, and any emergent impressions and social actions that mapping might produce in the DCAS, SSS, or in the overall program structure.

Within a local community or small public sphere, such as a department, a challenging issue with PAR is assessing my influence on the process and my ability to bracket my administrative or system-based power as department chair and as the primary researcher/facilitator workplace while maintaining my position as an equal in the process to express communicative power (Habermas, 1996). The ability to shape the debate and control the questions indicates administrative power. The control of one’s own administrative power in service to the democratic process of the community is the primary role of the facilitator in a discursive community. The delimiters of whether or not I successfully bracketed administrative power from a participant view should be recognizable in the moments in the study when participants are able to speak truth to power, meaning, they can tell me when and why something should not go the way I suggested or not continue on a path set earlier in their deliberations. The ability to change the curriculum or challenge the process indicates not only the internal confidence of the speaker, but also the creation of a communicative space necessary to share those thoughts and have them enter group discussion. When this occurs, communicative power trumps administrative power and the potential for the group to reach shared understanding and possibly consensus through rich rational debate represents public sphere thinking in action. Ultimately, it is for the
reader to assess whether I have met the high standards described for a public sphere servant adopting a PAR orientation, and furthermore, it is for the reader to assess whether the project details presented below and the results discussed in Chapters 5, 6, and 7 describe actions and results that represent changes of an emancipatory nature in faculty member agency.

**Guiding Principles for Curriculum Mapping and Participatory Action Research**

Kemmis and McTaggart (2005) situate participatory action research within the realm of social action by drawing heavily on Habermas’ (1996) notions of ‘communicative action’ and ‘public spheres’. Public spheres are “actual networks of communication among actual participants … there are many public spheres” (Kemmis & McTaggart, 2005, p. 584: italics original). From this perspective, “participatory action research groups and projects might be seen as open-textured networks established for communication and exploration of social problems or issues and as having relationships with other networks and organizations in which members also participate” (p. 584).

The faculty members in the Sport Science department at Douglas College represent an existing public sphere organized around workplace actions in relation to their shared curriculum and goals. The constitution of public spheres as actual networks as opposed to theoretical ones is only one of Habermas’ (1996) ten identifiable features of public spheres. Column one of Table 6 describes all ten features of public spheres identified by Habermas and their relation to PAR groups. In column two, the features of public spheres and a PAR
study are operationalized into guiding research and action principles utilized throughout the participatory curriculum mapping process undertaken in this study.
### Table 6. Public Spheres, Action Research, and Guiding Principles for Curriculum Mapping

<table>
<thead>
<tr>
<th>Ten features of a public sphere and related understanding of participatory action research (drawn from Kemmis and McTaggart (2005, p. 584-591))</th>
<th>Principles for aligning the facilitation of, and inquiry into, a curriculum mapping process with democratic and social understandings of communicative actions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. They are constituted among actual networks of communication among actual participants. They are not a theoretical construct.</td>
<td>The participants involved during curriculum planning and enactment include students, faculty, outside stakeholders and curriculum designers if relevant. The communication mediums employed during the mapping process may be face-to-face, written, digital synchronous, or digital asynchronous.</td>
</tr>
<tr>
<td>2. They are self-constituted, that is to say they are formed by people voluntarily without coercion.</td>
<td>An accepted invitation to join the curriculum mapping process is deemed most powerful. The curriculum mapping process should be separated in time and form from any related administrative requirements that community members must do in relation to a project so as to limit perceived coercion.</td>
</tr>
<tr>
<td>3. They often come into existence in response to legitimization deficits, that is to say, the existing way of doing things is not working for, or seen as legitimate by, the group that forms the public sphere or participatory action research group</td>
<td>The need for a curriculum mapping process to legitimize metacurriculum-related actions needs to be determined before blindly proceeding. Legitimization deficits are not assumed, but may emerge as present through dialogue or investigation. The group must be provided the opportunity to identify the perceived deficits in their curriculum planning and implementation in relation to thematic curriculum implementation initiatives in their institutional environment. Group attention must be allowed to shift to areas of emergent deficit.</td>
</tr>
<tr>
<td>4.</td>
<td>They are constituted for communicative action and for public discourse, thus intersubjective agreement, mutual understanding and unforced consensus represent the communicative intentions of the group.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5.</td>
<td>Public spheres aim to be inclusive not just of identified members, but also of new members and outsiders. Participatory action research groups may seek contributions or membership from outside the group of immediate circle of influence. In education, this includes students, parents, politicians, etc.</td>
</tr>
<tr>
<td>6.</td>
<td>As part of their inclusive character, public spheres tend to communicate in ordinary languages allowing for mutual understanding. Participatory action from a group requires social understanding, which requires shared understanding or ‘common language’.</td>
</tr>
<tr>
<td>7.</td>
<td>Public spheres and participatory action research groups pre-suppose communicative self-determination or freedom. Members can freely occupy a variety of communication roles as desired; for example, speaker, listener, observer, etc. Participatory action research groups, “constitute themselves to give participants the right and opportunity to speak and be heard, to listen, or to walk away from the project or group” (p. 588).</td>
</tr>
</tbody>
</table>
Table 6. continued from previous

<table>
<thead>
<tr>
<th>8. “The communicative networks of public spheres generate communicative power; that is, the positions and viewpoints developed through discussion will command the respect of participants not by virtue of obligation but rather by the power of mutual understanding and consensus” (p. 589). In participatory action research, this shared understanding creates shared commitments.</th>
<th>Attempts by the researcher/facilitator or group members to move to fixed ends and policy must be resisted by the group and research/facilitator him or herself. Individual commitments to the group, profession, institution, and society are the cornerstone of agency (Schwier, et al., 2007), however, the commitment to the group should not be over-emphasized in the process due to the risk of social coercion undermining the perceived freedom of agency.</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Public spheres and participatory action research groups rarely have the power to legislate or compel change, even among their own members. “It is only by the force of better argument, transmitted to authorities who must decide for themselves what to do, that they influence existing structures and procedures” (p. 590).</td>
<td>Although not an intention of this curriculum mapping project, where action beyond the group is desired in the form of influencing institutional policy, the participants in the mapping process must consciously attempt to influence policy making committees or senior administration through well reasoned and supported arguments.</td>
</tr>
<tr>
<td>10. Public spheres and participatory action research groups are often associated with social movements in wider society. For example, the rise of a social conscience around feminist thinking may give rise to participatory action research groups interested in gender representations in a curriculum. They draw on the resources of the larger movement and then feed information and resources back into the broader movement as their understanding evolves.</td>
<td>The thematic curriculum and core competency movement relates to a growing instrumental view of curriculum and a desire for applied knowledge. It is desirable for the research/facilitator and members of the group to discuss the wider trends in order to situate one’s own understanding and one’s own commitment to wider societal trends: i.e. understanding of the wider social movement one is representing is required by Alexander’s (2005) definition of ‘strong evaluation’.</td>
</tr>
</tbody>
</table>
Researcher/facilitator/participant: The Roles of the Investigator

Participatory action research calls on all the participants, including the researcher, to be co-investigator and co-facilitator of a project, however it is not so naïve as to suggest that there is an equal and balanced relationship between all participants. “The question of facilitation usually comes up when there is an asymmetrical relationship of knowledge or power between a person expecting or expected to do “facilitation” and people expecting or expected to be “facilitated” in the process of doing a project” (Kemmis & McTaggart, 2005, p. 594).

Guba and Lincoln (2005) suggest that the way to come to terms with oneself as an embedded researcher is through a process of ‘reflexivity’. “Reflexivity forces us to come to terms not only with our choice of research problem and with those with whom we engage in the research process, but with ourselves and with the multiple identities that represent the fluid self in the research setting (Alcoff & Potter, 1993)” (Guba & Lincoln, 2005, p. 210). Citing Reinharz (1997), they suggest that the practitioner/researcher bring three versions of self into the research context: research-based self, brought self (historically constructed and representative of our current beliefs and values) and the situationally created self (p. 210). Reflexivity requires that we question our multiple selves through critical reflection to expose both our becoming through the process and our shaping of the process itself by our presence and actions. My participatory role in this project began when I identified the purpose of this study as described in Chapter 1 and continued throughout the study while in dialogue with faculty members and through the use of the CMRP Reports to
Faculty Members 1, 2 and 3 (See Appendices D, G, and J). The particular epistemological tint that I brought to this study is that curriculum as a social science is open to discursive influence, is always political, and our collective social reality can be shifted over time through dialogue. The direction and outcome of the dialogue may not be predictable; however my openness to the possibilities and a sense of optimism underpin my personal risk taking represented by this workplace based inquiry. My belief at the outset of this project was that risks to personal relationships within the department and my reputation as chair were real, yet the potential reward for the community and our students of a successful project far outweighed any personal risks.

**Separation of work and research during daily correspondence.**

In order to distinguish all research project correspondence from departmental business, all emails relating to the project were prefaced with the initials “CMRP” in the subject. CMRP is the acronym for Curriculum Mapping Research Project. Although this appears to be a seemingly small detail, the separation of research-related correspondence and work-related correspondence by design was an important consideration in allowing both the researcher and the faculty members to shift their conversations and assume multiple roles with regard to their work and the research project.
Study Description

Participants and consent.

Purposeful sampling was used in this study. To be eligible, participants had to be full or regular part-time (more than 50% FTE) Sport Science faculty members involved in delivering the Bachelor of Physical Education and Coaching (BPEC) at Douglas College in New Westminster, British Columbia. Recruitment of participants occurred in person and involved an explicit foregrounding of 1) the purpose of the study, 2) the duration of commitment involved in the study, 3) the participants’ rights to confidentiality and 4) the right to withdraw at any time without penalty. [See Appendix B for a copy of the informed consent letter]. The principal investigator was also a participant-facilitator and was responsible for ensuring that proper ethical principles were followed as laid out by the Tri-Council Policy Statement: Ethical Conduct for Research Involving Human (TCPS) (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Research Council of Canada, 1998 with 2000, 2002, and 2005 amendments). The TCPS stipulates that when taking a “subject-centered” approach, wherein recognition that relationships and collaboration are part of the research project in question, but at the same time, the researcher and subject perspectives on the project in question can be quite varied, respectful reporting and practice by the researcher are required.

With respect to the TCPS recommendations and recognition of the potentially negative side-effects of workplace based research for both
participants and the researcher if the project were entered into under feelings of coercion or duress, the Douglas College Research Ethics Board (DC REB) held a meeting of Sport Science department members without the researcher present to confirm the desirability of the research to the department as a work-based project and to ensure that interpersonal or positional influence was not a factor during individual member’s choice to participate. This step was completed before the DC REB granted final approval of the study and individual informed consent was pursued. The actions of the DC REB strengthened the validity of the research by providing a facilitated arms length discussion of the research which created time and opportunity for faculty members to consider their involvement and seek further information as necessary. After the two-stage informed consent process, all eligible faculty members (12) chose to participate in the study. With my involvement as researcher/facilitator/participant, the number of involved faculty members was 13. Table 7 provides a breakdown of faculty members’ years of experience in the Sport Science department in addition to their full time (F/T) or regular part-time (P/T) teaching loads.
Table 7. Faculty Member Years of Experience

<table>
<thead>
<tr>
<th>Years of experience in Sport Science Department</th>
<th>Number of faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;2 years</td>
<td>2 (both F/T)</td>
</tr>
<tr>
<td>3 years</td>
<td>2 (both F/T)</td>
</tr>
<tr>
<td>4 years</td>
<td>1 (P/T .75)</td>
</tr>
<tr>
<td>6 years</td>
<td>2*(1 F/T, 1 P/T .75)</td>
</tr>
<tr>
<td>7 years</td>
<td>2 (1 F/T, 1 P/T .75)</td>
</tr>
<tr>
<td>&gt;10 years</td>
<td>4(3 F/T, 1 P/T .75)</td>
</tr>
</tbody>
</table>

* One faculty member in the 6 year category had 2.5 years of maternity leave during that period.

**Location.**

For participant convenience, all interviews and work groups occurred in meeting and classroom spaces on the New Westminster campus of Douglas College at mutually agreed upon times between the researcher and participants. During the mapping phase, one faculty member completed her course surveys remotely via the internet. During the second interview phase, one faculty member moved provinces and her final interview was conducted using Elluminate© communications software over the internet.

**Mapping project description.**

To understand both the participatory and technical natures of the mapping process, this section describes the mapping project from dialogic and technical perspectives. Technology and dialogue are two necessary components of curriculum mapping. In order to generate curriculum maps, the group needed to gather, organize, interpret, and represent large amounts of curriculum data related to the BPEC program and the cross-curricular competencies associated with the DCAS and the SSS. This process required periods of dialogue in search
of shared understanding augmented by tools for capturing and representing the curriculum data. Table 8 provides a sequential overview of the study from the informed consent phase that began in February 2010 to the presentation of stage 2 curriculum maps in December 2010. The names of files and resources utilized at each stage of the process are included in column three of Table 8. When an associated document is included as an appendix to this study, the appropriate appendix is also identified in column three.
<table>
<thead>
<tr>
<th>Date</th>
<th>Mapping or research activity</th>
<th>Associated documents and resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/29/2010</td>
<td>Douglas College Research Ethics Board – 3rd party consent meeting without researcher present</td>
<td>DC REB ethics permission and SFU REB permission received Feb. 5, 2010</td>
</tr>
<tr>
<td>3/5/2010</td>
<td>Introduction presentation of curriculum mapping concept and research project at scheduled department meeting</td>
<td>DC Sport Science Curriculum Mapping .ppt presentation</td>
</tr>
<tr>
<td>3/15/2010</td>
<td>Individual meetings with faculty members &amp; informed consent process completed</td>
<td>Informed consent letter - Appendix B</td>
</tr>
<tr>
<td>4/8/2010</td>
<td>Preliminary interviews completed- (40-60 minutes each)</td>
<td>Interview 1 questions - Appendix C</td>
</tr>
<tr>
<td>4/25/2010</td>
<td>Circulation of Curriculum Mapping Research Report (CMRP) #1 to faculty members for feedback. CMRP report 1 based on interview 1 summary</td>
<td>CMRP report to faculty #1 - Appendix D</td>
</tr>
<tr>
<td>4-25-2010 to</td>
<td>Currickit software preparation – phase 1</td>
<td>DCAS description - Appendix A</td>
</tr>
<tr>
<td>5/3/2010</td>
<td>Pre-load DCAS Knowledge, Skills, Values (KSV) – 3 levels of outcome</td>
<td>SSS descriptions – p 15 of External influences on Douglas College SPSC curricula and student experience: A history (2004-2010) and snapshot - Table of contents included in Appendix F</td>
</tr>
<tr>
<td></td>
<td>Pre-load SSS Knowledge, Skills, Values (KSV)– DRAFT from 2007 documents</td>
<td>External influences on Douglas College SPSC curricula and student experience: A history (2004-2010) and snapshot - Table of contents included in Appendix E</td>
</tr>
<tr>
<td>5/3/2010</td>
<td>Faculty work week – Day 1:</td>
<td>Curriculum inquiry resource for SPSC faculty members (6 page curriculum document providing background language and the zones of inquiry model to facilitate discussion around curriculum and mapping).</td>
</tr>
<tr>
<td></td>
<td>Monday</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- BPEC degree history and curriculum overview</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Discuss course responsibilities (course assignments for data entry)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Discuss DCAS history and themes</td>
<td></td>
</tr>
<tr>
<td>5/4/2010</td>
<td>Faculty work week – Day 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tuesday</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- SSS discussion continued</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Instructional method discussion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Assessment method discussion</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Event Description</td>
<td>Notes</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>5/5/2010</td>
<td>Faculty work week – Day 3</td>
<td>- Currickit software preparation – phase 2 – load instructional and</td>
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<tr>
<td></td>
<td></td>
<td>assessment methods and adjust SSS knowledge skills and values as</td>
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<td></td>
<td></td>
<td>per discussion – adjustment made at lunch break in preparation for</td>
</tr>
<tr>
<td></td>
<td></td>
<td>afternoon session</td>
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<tr>
<td></td>
<td></td>
<td>- Afternoon session: Currickit survey completion for assigned courses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– Group activity in computer lab.</td>
</tr>
<tr>
<td>5/6/2010</td>
<td>Faculty work week – Day 4</td>
<td>- Non mapping departmental business and social activity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Individuals who did not complete mapping on 5/4/2010 completed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>their online course survey (3 faculty members)</td>
</tr>
<tr>
<td>5/28/2010</td>
<td>Circulation of CMRP report to faculty members #3</td>
<td>CMRP report to faculty #3 - Appendix F</td>
</tr>
<tr>
<td>6/22/2010</td>
<td>Interviews – second round completed – reflective interview on mapping process and</td>
<td>CMRP report to faculty #3 - Appendix J</td>
</tr>
<tr>
<td></td>
<td>outcomes</td>
<td>Interview 2 questions - Appendix K</td>
</tr>
<tr>
<td>Jul., Aug.,</td>
<td>Interview 2 transcription, analysis,</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dec. 3,</td>
<td>Presentation of 2nd generation curriculum maps and degree change</td>
<td>BPEC program overview maps;</td>
</tr>
<tr>
<td>2010</td>
<td>recommendations to faculty members as result of mapping and related department</td>
<td>“BPEC_Core_Program_Course_Progression_Map” and</td>
</tr>
<tr>
<td></td>
<td>dialogue.</td>
<td>“BPEC_Core_Program_Course_Progression_w_GR_Map” - Appendix L</td>
</tr>
<tr>
<td>Dec. 3,</td>
<td>Official end of research portion of project. Mapping as a tool for program review</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>and discussion is ongoing.</td>
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</tr>
</tbody>
</table>
**Mapping project – negotiating goals, meaning and process.**

The curriculum mapping project and research steps described in Table 8 contain a combination of moments wherein the Sport Science department instructors worked as individuals on components of the project, met as a group to discuss curriculum and program issues, or were involved in one-on-one interviews with the researcher. The steps outlined represent the need to complete specific tasks to gather and represent curriculum data in the form of curriculum maps; however, the sequence, volume of work and goals represented by the process described emerged as the project unfolded.

As Table 8 describes, the process moved through the phases of setting goals, developing a shared program and curriculum context; debating the merits and meaning of specific instructional methods, assessment methods, and thematic curricula; and finally, discussing the merits and future of the mapping in the SPSC department as a result of the project. The process of setting goals occurred during the interview phase when individuals were asked what they would like to see come from the research and the mapping project. During this phase, the need to have a program history and curriculum overview discussion at the outset of the project was added, based on the requests of newer faculty members to gain a better understanding of the Bachelor of PE and Coaching curriculum context and program development history. The goals and desires expressed in interview one helped set the proposed mapping process and sequence of discussions presented in Curriculum Mapping (CMRP) research report #1 (Appendix D). CMRP report #1 contained version one of the proposed departmental mapping process.
The program history discussion was facilitated by the construction and sharing of two contextual and historical documents i) “external influences on Douglas College SPSC curricula and student experience” (Appendix E), and ii) “Sport Science Signature History” (Appendix F). Following the contextual and historical discussion about curriculum, the discussion of instructional methods, assessment methods and the Douglas College Academic Signature (DCAS) and Sport Science Signature (SSS) elements occurred. During this phase, meaning was negotiated and new terminology and descriptions for practices occurring in the department were recorded. The instructional and assessment methods were recorded and shared back with the group in the form of a summary (Appendix H). In addition, new terminology representing local knowledge was added to the curriculum survey software in preparation for the individual work of completing course-related surveys. Although individual effort was required to complete the surveys online, the choice to complete the survey in a computer lab on campus saw 12 of the 13 involved faculty members completing their course surveys in one afternoon in the same room. This allowed for technical issues and questions relating to the software to be addressed by the facilitator in real time.

Upon completion of the main discussions and course-related surveys online, the results of the discussion and preliminary data were summarized and circulated back to faculty members for comments on the researcher’s summary of discussions and adjustments to the process that had occurred (see CMRP report to faculty members #2 - Appendix G). The final group discussions focused on the data that the course survey software had gathered. The discussion centred on what the data could or could not show us, the trustworthiness of the data, our departments’ wishes for the data and the
process of collecting it, and alternative representations of the data and their utility (i.e. VUE visual representations) (see CMRP report to faculty #3 - Appendix J). Following the final review of data and group discussion of the future of mapping and the project in the department, CMRP report to faculty members #3 captured key elements of the discussion and direction set for feedback. All CMRP reports were open to feedback and correction by faculty members. In addition, the final interview provided a one-on-one opportunity for faculty members to express personal feelings about the mapping process or the results without the scrutiny of peers if they so wished.

**Mapping project – technical detail.**

The technical elements of this mapping process involved three phases; 1) preparing the software (Currickit) to reflect Douglas College and departmental terminology related to knowledge, skills, values (KSV), instructional methods, and assessment methods; 2) capturing curriculum data using the curriculum survey software Currickit; and 3) presenting the mapping results using Currickit, Microsoft Excel, and Visual Understanding Environment (VUE) software.

Currickit was developed at Guelph University by Richard Couto in the educational technology division and the Teaching Support Services (TSS) team led by Associate Director, Peter Wolf (personal communication with Rich Couto, Richard Gorrie and Mary Wilson, January 13, 2010). Their goal was to create a tool to support instructors, departments, and administers tasked with reviewing and planning curriculum with external degree requirements. Mapping fits the TSS curriculum review and planning process as an iterative component of the overall process of curriculum evolution depicted in Figure 5.
Specifically, the purpose of the Currickit software is to act as a curriculum survey tool that captures data about courses and programs by allowing instructors to answer a series of questions related to core knowledge, skills, and values and the predominant instructional and assessment methods used in courses (See Figure 7 for a view of the software survey questions). The software is not publicly available for purchase at this time. Permission to use Currickit and a two-year support guarantee (Guelph agreed to keep the site active for two years free of charge) was granted by TSS and Guelph in exchange for feedback on the software interface, submission of bug reporting, and feedback on the embedded facilitation process. The workflow for preparing and using Currickit to review the BPEC program involved:

1. identifying all courses involved in a program (core and service courses as desired) (see Figure 8),

2. identifying all the instructors involved in a program and assigning them to the relevant course along with entering email contact information (see Figure 8),

3. identifying the core knowledge, skills, and values (competencies or outcomes) that are under consideration for the review and pre-loading the appropriate terminology and sophistication levels (see Figure 9),

4. identifying locally used instructional and assessment methods and pre-loading the language and descriptions (see Figure 10 and Figure 11),

5. opening the survey to instructors and deciding on whether or not to enter the data as a group simultaneously, or individually on one’s own time
(group simultaneous entry using a computer lab was chosen for this project),

6. tracking survey completion by instructors (see Figure 12), and

7. reviewing the results with instructors in light of the project's original and emergent goals and directions (mapping and results are discussed in more detail in Chapters 5, 6 and 7).
Figure 7. CurricKit Survey Question List – Designer’s View

**CurricKit - Douglas College**  
*A Curriculum Mapping Toolkit*

**Instructor Survey**

--- Change Survey Close Date

| Close Date: | June | 15 | 2010 | COMMIT |

<table>
<thead>
<tr>
<th>Num.</th>
<th>ID</th>
<th>Question</th>
<th>Question Type</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>365</td>
<td>What instructional strategies and pedagogical techniques do you use in your course?</td>
<td>Instruction</td>
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</tr>
<tr>
<td>2</td>
<td>366</td>
<td>What formal assessment approaches do students engage in for this course?</td>
<td>Assessment</td>
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</tr>
<tr>
<td>3</td>
<td>367</td>
<td>Is the following developed in your course?</td>
<td>Taught/Evaluated</td>
<td>DELETE</td>
</tr>
<tr>
<td>4</td>
<td>368</td>
<td>What is the level of sophistication expected for the following?</td>
<td>Graduate Level</td>
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</tr>
<tr>
<td>5</td>
<td>369</td>
<td>Please specify how each item is Taught and/or Assessed</td>
<td>EM Detail</td>
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</tr>
<tr>
<td>6</td>
<td>370</td>
<td>How are the total marks available to students distributed over the course of the semester?</td>
<td>Percentage</td>
<td>MOVE UP</td>
</tr>
<tr>
<td>7</td>
<td>371</td>
<td>Do you allow your students optional assignments or optional weighting of assignments? If so, please specify</td>
<td>Comment</td>
<td>DELETE</td>
</tr>
<tr>
<td>8</td>
<td>372</td>
<td>Do you have any general comments?</td>
<td>Comment</td>
<td>MOVE UP</td>
</tr>
<tr>
<td>9</td>
<td>373</td>
<td>Thank you for participating in this mapping process.</td>
<td>Label</td>
<td>MOVE UP</td>
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Figure 8. CurricKit, Course List – Designer’s View

Figure 9. CurricKit, Knowledge, Skills and Values List – Designer’s View
### Figure 10. Currickit, Instructional Methods List - Designer's View

<table>
<thead>
<tr>
<th>Instructional Method</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case study</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Demonstration</td>
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</tr>
<tr>
<td>Design project</td>
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<tr>
<td>Field Experience</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Formal Group Work</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Guest Speaker (External)</td>
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<tr>
<td>Guest Speaker (Internal)</td>
<td>REMOVE</td>
</tr>
<tr>
<td>In-class activity</td>
<td>REMOVE</td>
</tr>
<tr>
<td>In-class Writing</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Informal Discussions/Group Work</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Laboratory/Tutorial</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Lecture</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Multi-media Presentation</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Peer Teaching</td>
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</tr>
<tr>
<td>Paper assessment</td>
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</table>

### Figure 11. Currickit, Assessment Method List, Designer’s View

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Action</th>
</tr>
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<td>Case Analysis</td>
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</tr>
<tr>
<td>Case Creation</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Connections assignment</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Graphics (Maps, Plans, Schematics, Blueprints)</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Interviews</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Journal/Reflective Writing</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Lab Report - Group</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Lab Report - Individual</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Mastery quizzes</td>
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</tr>
<tr>
<td>Mentor (external) evaluation</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Observation of student instruction (instructor)</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Observation of student instruction (peer)</td>
<td>REMOVE</td>
</tr>
<tr>
<td>Oral Presentation (Group)</td>
<td>REMOVE</td>
</tr>
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</table>
Figure 12. CurricKit, Survey Progress Tracking, Designer's View

SPSC Curriculum Mapping 2010

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Course Component</th>
<th>Progress</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPSC 3275: Advanced Physiology of Exercise and Training 001</td>
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<td>8 / 8</td>
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</tr>
<tr>
<td>SPSC 4250: Advanced Sport Analysis 001</td>
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<tr>
<td>SPSC 4181: Fitness Assessment and Prescription 001</td>
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<tr>
<td>SPSC 2275: Physiology of Exercise and Training 001</td>
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</tr>
<tr>
<td>SPSC 1192: Topics in Human Nutrition 001</td>
<td>8 / 8</td>
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<td></td>
</tr>
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<td>SPSC 1513: Applied Methods: Athletics and Swimming 001</td>
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<tr>
<td>SPSC 1517: Applied Methods: Dance 001</td>
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<tr>
<td>SPSC 1516: Movement Education/Gymnastics 001</td>
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<td>SPSC 1515: Performance Analysis: Tennis Badminton 001</td>
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<td>SPSC 3276: Athletic Injury Assessment and Management 001</td>
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<tr>
<td>SPSC 1195: Physical Growth and Motor Development 001</td>
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<tr>
<td>SPSC 1192: Topics in Human Nutrition 002</td>
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<tr>
<td>SPSC 1151: Biomechanics 001</td>
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<tr>
<td>SPSC 4201: Advanced Exercise and Sport Psychology 001</td>
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<td>SPSC 2204: Applied Methods: Basketball and Field Hockey 001</td>
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<td>SPSC 2231: Sport and Exercise Psychology 002</td>
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<td>SPSC 1100: Fieldwork I 001</td>
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<td>SPSC 1200: Fieldwork II 001</td>
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<td>SPSC 2100: Fieldwork III 001</td>
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<td>SPSC 4100: Fieldwork VII 001</td>
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<td>SPSC 4200: Fieldwork VIII 001</td>
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<td>SPSC 1164: Dynamics of Motor Skill Acquisition 001</td>
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<td>SPSC 3202: Health Promotion 001</td>
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<tr>
<td>SPSC 2231: Sport and Exercise Psychology 001</td>
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<td>SPSC 1314: Alternative Environment Education: Summer 001</td>
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<td>SPSC 1319: Alternative Environment Education: Winter 001</td>
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<td>SPSC 1103: Conditioning for Sport and Physical Activity 001</td>
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<td>SPSC 2205: Leisure and Sport in Canadian Society 003</td>
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<td>SPSC 2205: Applied Methods: Volleyball and Softball 001</td>
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<td>SPSC 2399: Games Approach to Teaching and Coaching 001</td>
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<tr>
<td>SPSC 1195: Physical Growth and Motor Development 002</td>
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<tr>
<td>SPSC 2222: Applied Methods: Rugby and Soccer 001</td>
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<tr>
<td>SPSC 1105: Introduction to the Study of Sport 001</td>
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<td></td>
</tr>
<tr>
<td>SPSC 2205: Leisure and Sport in Canadian Society 002</td>
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<td></td>
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<td>SPSC 4291: Curriculum and Planning Issues in PE and Coaching 001</td>
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<td>SPSC 3159: Inclusive Physical Activity 001</td>
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<tr>
<td>SPSC 2205: Leisure and Sport in Canadian Society 001</td>
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<td>8 / 8</td>
<td></td>
</tr>
<tr>
<td>SPSC 1105: Introduction to the Study of Sport 002</td>
<td>8 / 8</td>
<td>8 / 8</td>
<td></td>
</tr>
<tr>
<td>SPSC 2240: Leadership in Sport, Physical Education &amp; Coaching</td>
<td>8 / 8</td>
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<td>SPSC 2222: Contemporary Health Issues 001</td>
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<td></td>
</tr>
<tr>
<td>SPSC 1314: Performance Analysis: Wrestling and Judo 001</td>
<td>8 / 8</td>
<td>8 / 8</td>
<td></td>
</tr>
<tr>
<td>SPSC 4199: Physical Education and Coaching Methods 001</td>
<td>8 / 8</td>
<td>8 / 8</td>
<td></td>
</tr>
</tbody>
</table>

Questions:

- What instructional strategies and pedagogical techniques do you use in your course?
- What formal assessment approaches do students engage in for this course?
- Is the following developed in your course?
- What is the level of sophistication expected for the following?
- Please specify how each quality is Taught and/or Assessed
- How are the total marks available to students distributed over the course of the semester?
Forms of data.

In addition to pre- and post-project interviews, which inform the upcoming results and discussion, the mapping process included a number of artefacts and documents that first presented in Table 8 and included in the appendices that were generated while undertaking the mapping. The qualities of a mapping process under investigation here are not separable from the forms data generated throughout the process. The data of this project can be broken into three layers; 1) the curriculum data created and represented in maps, 2) the curriculum mapping process artefacts and data, and 3) the interview data concerned with the qualities of the chosen mapping process.

The curriculum mapping data came primarily came from faculty input about the content and the instructional and assessment methodologies of their course(s) entered into the Currickit software. However, the framework of the questions, the organization of the curriculum maps, and the results were informed by data entered from the following list of sources:

- Douglas College Academic Signature Framework (2007) (Appendix A),
- Sport Science department documents created between 2005 and 2009 describing the Sport Science Signature (Appendix F),
- 2010 Sport Science annual education plan identifying course instructors,
- Douglas College Calendar identifying graduating requirements, and
- Douglas College official curriculum guidelines for each course describing the pre-requisites of each course necessary for understanding progression.

The curriculum mapping process artefacts that informed the mapping project and now inform the results and discussion of this document include the schedules and documents produced before, during, and after the project that helped organize and perpetuate the work of faculty members. Due to the participatory nature of the chosen
methodology, the following four documents represent important process artefacts used to create transparency and cohesion in the process and iterate emergent goals and feedback back to the group for validation of decisions and progression of the project:

- External influences on Douglas College SPSC curricula and student experience: A history (2004-2010) and snapshot (for the TOC see Appendix E & for the history summary see Appendix F).
- Curriculum Mapping Research Project - Report to Sport Science Faculty #1 (Appendix D)
- Curriculum Mapping Research Project – Report to Sport Science Faculty #2 (Appendix G)
- Curriculum Mapping Research Project – Report to Sport Science Faculty #3 (Appendix J)

The final form of data collection was the use of pre-and post mapping process individual interviews with faculty members. Interview protocols are discussed in more detail in the following section. As a data source, the interviews were designed to gain insight into the qualities and theoretical considerations of mapping as a curriculum development process. In combination with facilitator/researcher reflections and process artefacts, the interviews provided very rich insights into qualities of maps and mapping of most relevance to future facilitators and researchers. The interview protocols and surrounding data allowed for insights in the results and discussion that follow regarding both practical and theoretical implications of choosing a participatory action model for curriculum processes such as mapping and the relationship between process and faculty member agency in this case.
Interview protocols.

Each Sport Science faculty member participated in two one-on-one semi-structured interviews as part of this study, one before the mapping project was undertaken and one reflective interview after the mapping process. During the interviews, the conversation was allowed to flow around the question topics and questions were re-ordered or re-phrased during the interview in an effort to create the most natural flowing dialogue possible. The interviews were concluded when all questions and prompts on the question guide were exhausted and interviewees indicated that they had nothing further to add in relation to either the process or the curriculum as discussed. The semi-structured format led to a range of interview lengths (35-65 minutes) with the average being approximately 45 minutes long.

The pre-mapping interview questions are contained in Appendix C and focused on the faculty member’s prior experiences with the Douglas College Academic Signature (DCAS), Sport Science Signature (SSS), and as a comparative cross-curriculum framework, the National Coaching and Certification Program (NCCP) content embedded throughout their courses. It was known that all faculty members had some exposure to the NCCP curriculum and its inclusion throughout our curriculum was discussed at department meetings within the past 12 months. The preliminary interview also explored faculty members’ goals and desires for a curriculum mapping process. Finally, in an attempt explore curriculum-related agency a question relating to past curriculum change motivations was included using Schwier et. al.’s (2007) domains of agency in instructional design (interpersonal, societal, institutional, and professional/disciplinary). Individuals were asked to think of an example of past
changes they had made to courses and account for their motivation with regard to the four domains. During ensuing discussions, the possibilities of tension and coherence between domains of assessment were explored.

The second interview was primarily reflective in nature. Faculty members reported what they learned about the DCAS, the SSS, and the mapping process. The second interview used reflective prompts (see Appendix K) and was more open-ended than the first. In addition to the reflective focus, faculty members were asked about the future of mapping in the department and what they would like to see happen as a follow-up to the formal research portion of the exploratory mapping experience.

**Interview and data analysis.**

All interviews were transcribed verbatim and imported into Atlas.ti version 6.2 Scientific Software in preparation for tagging, hyper-liking, and concept mapping. The audio and text files for each interview were then manually linked on a paragraph-by-paragraph basis in order to allow for analysis of tone and intonation during second reading. Coding of the text while listening to the audio began with a small set of pre-loaded codes derived from Alexander's (2005) definition of agency and Schwier et. al.'s (2007) domains of assessment, in addition to the research questions. These codes were helpful for separating mapping process insights from curriculum and agency insights, however, by half-way through interview one, they were deemed insufficient to capture participants' curriculum thoughts and insights into metaphoric and analogic thinking. A constant comparative method was used to add new codes and developed linked codes as the interviews progressed (Merrian, 1998). Upon completion of round one of coding, the codes were analyzed using the network view in Atlas.ti in order to
identify any redundancy in code names, identify robust codes with high density, and link codes through the association manager in order to test connections that had emerged. During the code review occurring at the network stage, a few codes were merged and strong and weak associations became identifiable.

In addition to all the interviews being loaded into Atlas.ti, for analysis, coding, and linking, all the other documents produced during the project and used by the group were loaded into Atlas.ti for coding and inclusion in relational views. Thirty-seven original documents including interview transcripts were uploaded for analysis, coding and inclusion in network views. The appendices contain some of these documents in whole or in part, including the three Curriculum Mapping Research Reports to faculty that represented moments of iteration in the facilitation process. The findings and conclusions presented in the remaining chapters are a summary of the emergent themes and insights that occurred as a result of the analysis described above.
Chapter 5: Results

The results of this study are layered in the same fashion that the data forms of this study are layered. On the technical level of map production and products, there are results that demonstrate the possible utility of maps for faculty decision making and information organization. On the mapping process level, there are insights to be gained from documents produced during the study and the reflections of faculty members on the chosen methods and process of mapping. On the theoretical level new grounded insights emerged related to curriculum development and understanding agency using public sphere thinking and metaphor. Moreover, the products and processes can be judged in light of both the research purposes set forth before the project began and the emergent goals of faculty members identified during the early stages of the participatory process. Efficacy of the process and utility of the maps as judged from within a participatory framework are dependant on whether or not the maps and process met locally articulated goals and expectations expressed by Sport Science department members. The results below are derived from participant pre-interviews, process documents, facilitator reflections, and post-mapping interviews.

The theoretical and practical insights into the relationship of faculty agency and curriculum mapping relate to the pre-ordained purpose of this study to investigate the qualities of the relationship between a mapping process derived using public sphere thinking and faculty member agency. The theoretical framing of this study using
Alexander (2005) and Schwier et. al.’s (2007) agency theories and the participatory action research methodology based on public sphere theory initiated the theoretical directions, yet the results pointed to deeper insights relating the forms of curriculum to the underlying narratives of the community within which they are used. The results supporting this emergent line of curriculum theorizing are presented at the end of this chapter and picked up in more detail in the discussion.

In an effort to organize the results in the layered fashion presented above, this chapter first discusses the goals of the mapping process as articulated by faculty members. The results of the process (maps and process factors) are then viewed in light of these goals. Results relating to faculty agency are then presented. Finally, the chapter concludes by discussing emergent grounded theory relating to understanding curriculum landscapes and curriculum development using metaphor and public sphere thinking.

**Defining the Goals of the Project: What do Faculty Members Want?**

In the pre-study interview, faculty members were asked to consider the outcomes and process of the project through the following three discussion prompts:

- There are a lot of things we can map and types of maps we can create. For example, we can make assessment maps, competency maps, pre-requisite maps, experience maps. What would you like to see as a result of this process in the form of maps?

- Other than the maps themselves, are there other goals you can think of that we should strive for?

- Given what you know so far about mapping, our curriculum, and our department can you imagine any hurdles or pitfalls in front of us that by identifying now, we stand a better chance to avoid? (Interview 1 question guide: Appendix C)
The responses to these questions and related questions are organized below into a presentation of goals relating to student experience, the use of maps, and the curriculum development process and work culture.

**Goals related to student experience.**

During their preliminary interviews, most faculty members included the impact of maps or mapping on students as a desirable benefit of the process. In some cases they were responding to the explicit prompt asking ‘who they envisioned as users of maps?’ In other cases, the inclusion of student experience into the discussion was unsolicited. Faculty members felt that mapping would benefit students in the following ways: an increase in transparency of curriculum goals (18 quotes), a reduction in redundancy of assessment methods and curriculum across courses (19 quotes), an improvement in continuity of experiences between courses (11 quotes), and an improvement in content progression (4 quotes) in the program. The following quotes capture some of the sentiments towards empowering students by making curriculum transparent through the sharing of maps:

*I think the transparency to students is incredibly important, because then they would see what they’ve bought into and they see what our vision is, what is important, what our criteria are. (Interview 1:222)*

*I still think we should be able to say to the students “You should be able to do these things”. And that I should be able to sit down with a student and say “what does this mean? Do you know how to do this? And, What is it?” (Interview 6:143)*

*By saying this is the amount of courses you’re going to do over the next three years and this is all the research you’re going to have to do … listen now and pay attention to how you do it. It’s explicitly telling them the expectation and is raising the bar for them. … And I think any time we can do that it is really good because then they understand what the expectation is. (Interview 10:231)*
The transparency to the students I think is important. So if it’s the action documents or products we create, there has to be faculty in mind and students in mind. They are the ones that need the buy in. (Interview 13:166)

There was general agreement that students’ awareness of the goals and curriculum surrounding them in the form of competencies, outcomes, and assessments, would lead to improvements of student experiences in the program. The implicit assumption here is that student meta-cognition leads to goal-driven behaviour by the student in an effort to meet external expectations. Whether students are given enough responsibility and say in how to meet their competencies is a layer of pedagogy and curriculum analysis beyond that undertaken here. What is clear is that the mapping of outcomes and competencies with detailed progressions is considered by faculty members as benefiting students. They imagined the process creating maps that act as potential touchstone for students with regard to their program progress. A powerful example of this occurred when one faculty member held out the potential of maps to act as a remedial tool for transfer students to understand the curriculum landscape they immigrate into.

A student comes in with a gap. Let’s say they transfer from a different institution into third year fieldwork ... so if it is identified that they do not have this background information for example ‘familiarity with the critical thinking model’ or leadership or emotional intelligence, that the first and second year students here would have gotten in their courses, they would be responsible for that gap remediation in some ways. (Interview 13:28)

External goals and knowledge frameworks would hopefully be internalized by the students by the time they graduated. A few faculty members also counter-balanced this potentially idealistic view of transparent curriculum with anecdotes about what it may really be like as an undergraduate student surrounded by too much information: For example,
When I reflect back to being an undergrad student and I see the students now. Sometimes they're really in the 'need to know what you said' mode. You know “thanks for thinking of me but I don’t really need that information. It’s not huge on my radar right now. Tell me how I need to be successful in this course.” I think they trust us to have done that work. To make sure that we’ve got all those scaffolding aspects in mind so that they do grow through the program. (Interview 7:263)

This point of view is presented as a hedge against romanticizing transparency as a solution to the non-linear nature of learning and the fact that students forget content and processes that are not regularly reinforced. Transparency by-way-of student-focused maps was also presented as a possible solution to the frustrations faculty members feel when their expectations of student readiness do not match student abilities. Content and progression maps that are public represent a possible form of assurance to these instructors that students arrive to them with specific skills and abilities that have been assessed in prior courses.

... students can’t come back and say well I didn’t know how to do this. [If they do you can ask.] Well you did take 1103 so you should have learned how to do - like APA style. ...By second and third year they have no excuse. (Interview 22:161)

In this regard, student accountability for their learning was coupled with transparency. In short, students can’t be held to account when faculty are not confident that something is taught in prior courses. A trusted map was deemed a tool for increasing trust between faculty members, thereby, providing a set of landmarks to anchor student accountability demands made by faculty members.

The power of maps for students was not deemed implicit to the maps themselves. Some faculty members discussed the curriculum and pedagogy detail required to implement a cross-curriculum competency model and suggested that student-maps should be considered in light of the aims of a course and the overall program. This sentiment was captured in “Curriculum mapping research project (CMPR)
The potential use of maps for student information also had mixed support. The following comments capture some thought as to why student maps may not be received with as much enthusiasm as we present them: “students want ‘what do I need to know’ information a lot of the time [and therefore], overloading them doesn’t always help,” and “if we are presenting student maps, we need to teach the themes or content of the map, otherwise it might just be confusing to them.” (CMRP Report to SPSC Faculty #1, p.2)

The net result of the pre-project review of interviews was a decision to focus on faculty member maps first and if time permitted to begin to derive student versions of maps. The underlying thread of the student map discussions during interviews was that students should be exposed to the goals, outcomes, and general curricular thinking behind a program. This exposure, however, cannot be considered apedagogically and requires attention to students’ developmental readiness for understanding and processing the complexities of the curriculum landscape that surrounds them. This balance may come in the form of teaching students to ‘situate oneself’ in a field of meaning; a topic which is revisited in the discussion.

The decision to not directly pursue student maps at the outset did not leave students out of the discussion. The identified bi-products of faculty members increasing their understanding and adjusting their curriculum were presented by faculty members throughout their interviews as opportunities for students to experience improved content and outcome progressions, improved continuity of experience, and reductions of redundancy in material. The following quotes represent instructors’ concerns over redundancy:
And when talking with [other faculty members] you know I get the sense that we are somewhat redundant in what we do with our students. (Interview 2:129)

In the skill analysis courses I think there is a lot of repetition between courses. ... You mentioned content. Take something like pedagogy. Are ___ and I saying the same thing over and over and over. Conditioning. Warm up. Lesson plan. Cool down. Are we saying the same thing over and over and over? (Interview 4:159)

The following quotes represent instructors concerns for students regarding continuity and progression:

That brings up all sorts of questions around how do you create continuity in student learning and experience so that they remember more? So if we really truly believe that something is important by a certain point in the program that they can do independently without reminder then we have to ask ourselves: are we really doing that? Are we giving them the kinds of educational experiences that create the outcome we are expecting? (Interview 17:139)

How can you progress in education when missing the base. It’s like how can you teach somebody passing the basketball if that somebody cannot even catch a ball? (Interview 12:254)

All of the goals held for students including transparency and student accountability in some way required faculty to coordinate their efforts and come to some shared understanding. The goals of improving progressions, improving continuity of experience, and reducing redundancy are now rolled forward into the discussion of product and process goals set by faculty members at the outset of the project.

**Product goals: what do you want out of this?**

After the first round interviews, the questions relating to the products of mapping desired from the process were reviewed to identify priorities for the project. Due to the fact that mapping was new to all but two faculty members, the original question had to expand in order to allow faculty members deeper consideration of what they may or may not want out of the process. One faculty member described this as a moment of “informed ignorance” wherein I was asking her to give input about products she was not
familiar with. Through refinement of the question after the first two interviews, a pattern emerged in the data suggesting that areas of the curriculum that would be useful to map included assessment and teaching methods, the DCAS items and in particular items relating to research methods. Although it was outside the purpose of this project, a map that was recommended as having high potential utility for faculty members was a student-version of our NCCP competency documents in the form of a map showing all the course connections. These recommendations were captured in the ‘CMRP report to SPSC faculty #1’ and circulated to faculty members with a request for feedback on April 25, 2010, eight days prior to our first mapping session, May 4, 2010.

The following were identified as potentially desirable for informing one’s teaching practice. However, as one person stated and others seemed to agree “it’s hard to know what will be useful until we see them”. When asking this question, I always listed at least 4 maps and the two most common responses from the list I presented were assessment and teaching methods maps. The most common map or area of discussion that I did not list in my question was research methods. In addition to signature items, two other types of maps that were raised more than once as potentially useful were content threads and student maps that link course outcomes or activities with a theme or the NCCP. (CMRP Report to SPSC faculty #1, p. 2, emphasis original)

On May 4th the recommendation to proceed with the above listed product goals for maps was approved and requests for any further input were invited before proceeding with the mapping process as laid out in the methodology described in the same report (see Appendix D).

Process goals and workplace culture.

In the pre-mapping interviews, a significant portion of the discussion was dedicated to exploring what non-product expectations or goals the department should aim for and exploring any predictable pitfalls or hurdles we may face as we progress. Due to the fact that none of the faculty members had specific experiences mapping
undergraduate curriculum, the insights derived from the data and reported here can be considered insights into what faculty value in their work and how curriculum process should reflect or respect those values. As expected, faculty values regarding workplace functioning are as diverse as the individuals, however, there were emergent themes in their comments that served as lighthouses during the mapping project. ‘CMRP report to SPSC faculty #1” captured a number of these themes in an effort to have faculty members check the initial results of interview one and co-define the process by having the opportunity to review the report in the week leading up to the initial meeting and validating the process at the first group meeting on May 4, 2010. The block quote below taken from ‘CMRP report to SPSC faculty #1’ discusses insights presented to faculty members regarding mapping process goals and potential hurdles and pitfalls raised by the group during individual interviews.

**Initial background findings relevant to constructing our process:**

- There is an uneven experience within the department regarding the DC signature, SPSC signature, and NCCP curriculum based on the length of time an individual has been at the College, courses taught and personal focus.

- There is a genuine and generalized desire to revisit the “big ideas” of our cross-curricular intentions (signature items) based on a number of individual motivations that range from: simply learning about them for the first time to opening up dialogue about what is included, excluded and what should possibly be added.

- Terminology around the DC signature, SPSC signature, and use of words like themes, inter-disciplinary, cross-curricular, and even what we mean when we discuss ‘curriculum’ are not consistent within our group, our documentation, and our individual conversations.

- Of the three areas of discussion, DC signature, SPSC signature, and NCCP material, the NCCP material appears to be well understood by faculty members with regard to how it fits into a particular course if their course is identified as holding a responsibility to the NCCP project.
Summary of emergent goals based on findings:

- Creation of resource documents and conversation opportunities for those who have not been afforded an opportunity to engage with the DC or SPSC signature.

- Build the process on a foundation of dialogue that revisits the content of the signature at the DC and SPSC levels.

- Build ongoing curriculum dialogue into any curriculum inquiry processes agreed to by faculty members. [All faculty either explicitly or implicitly identified ongoing curriculum dialogue as a component of either what has worked for them in the past or what will make future curriculum endeavours successful.]

- View the CMRP as a catalyst to curriculum inquiry as opposed to a fixed length project with predictable and/or static outcomes. The CMRP is simply a snapshot in time of the department’s curriculum work and an assessment of the utility of a curriculum mapping process for faculty engaged in curriculum inquiry.

- Create a ‘legacy document’ or set of documents that can be used by new faculty members or outsiders to understand the cross-curricular intentions embedded in our SPSC curricula.

Summary of pitfalls and hurdles raised:

- Commitment: A number of faculty members expressed the fact that to succeed in curriculum inquiry and change all of the faculty involved in course areas related to a signature item (or teaching different sections of the same course) have to follow-through on what is decided by a group in relation to specific cross-curricular actions. The opposite of commitment was expressed by one faculty member as “lip-service” and another as “head-nodding”.

- A related point that was raised as a potential risk was the ‘Brian factor’. Specifically, that an ongoing commitment to curriculum inquiry is different than a commitment to Brian’s research. Therefore we need our mapping process to foster commitment to curriculum inquiry as its primary motive.

- Time: All faculty members at some point made indirect or direct comment about the time involved in curriculum inquiry and curriculum discussions. The competition for time between disciplinary-based curriculum and pedagogy development and competency-based development was raised as a specific tension by a few. (CMRP Report SPSC faculty #1, p. 1-3)

The big ideas of how Sport Science faculty members wanted to organize their work can be reduced to a few key statements. In the following description of faculty
desires for the mapping process, the codes that emerged during the interview one analysis are underlined. According to faculty members, the process should:

- foster dialogue and be an open space for new ideas,
- foster shared understanding of local curriculum,
- respect faculty time and commitment required to do the work,
- lead to the development of shared curriculum goals,
- respect varying levels of curriculum knowledge (both local and general) amongst participants, and
- foster accountability and follow-through in relation to departmental curriculum goals.

The desire for open dialogue about curriculum through the process was summed up nicely by one faculty member when she said: “So if we could all just open ourselves up to the generative process that could emerge and go with big ideas first” (Interview 7:231). Another presented her openness to emergent dialogue and process by stating that she is more “interested in what comes out of it rather than having some prediction or expectations of what’s going to come out of it. I think it’s neat. I think it’s got lots of places it can go” (Interview 9:398). Dialogue was often coupled with other goals for the process as in the following quote that captures desire for inclusivity with respect of individuality, a desire to work cohesively towards shared goals:

I think we should strive to get as many faculty members involved as we can. I think that would be really important and that speaks to what I said previously about the fact that we do well because we have a cohesive unit. That is working towards a common end even though we have our own personal specifics. (Interview 6:403)

Along with the dialogue and shared goals, accountability and follow-through were identified by many faculty members as a desirable goal. There is a very important distinction to make at this point that accountability to local goals and follow-through on
actions related to those goals was the primary focus of the interview discussions. Accountability to external goals requirements relating to the DCAS was experienced by all the department members in the Fall of 2009, approximately 8 months prior to this project. At that time, faculty were asked to complete a checklist of DCAS items related to their courses that showed the level zero to four sophistication of each item in the course. There was no associated professional development, discussion or department input into the process at the time. The following comments about that process came up during the first interviews:

> We gathered this, now where is it? How is it being used? And then if you fire it upstairs maybe and just because it’s an accountability thing it’s done, checked off the list, never really gets followed up on. How does it get used? (Interview 3:104)

> We might sit around in a group and say yes we do this, yes we do this, we do this very well. But when we go into the classroom when these other faculty members aren’t around do we actually do it? You might tick this box but are you actually practising it? (Interview 5:235)

In contrast to the external accountability measures required by the College and discussed above, the following quote references a local curriculum discussion about the progression of research methods throughout the BPEC degree that happened in May 2009, one year before this project took place:

> And I remember that conversation and thinking that process was incredible. I mean my area isn’t research. I left it to most of our faculty to deal with that. And I think the end result of that was fabulous but it went nowhere. Well I shouldn’t say it went nowhere ... I’m sure people took away and thought about in their courses but at the department level to map it, to follow it, to ensure it occurs ever actually took place. And what, for me from that conversation I thought of two or three others that needed to be mapped exactly like that. (Interview 1:194)

With regard to goals for this project, the idea of shared goals and commitments was expressed in relation to the above two examples. In the first case, there was no commitment or follow-through by faculty members and in the second case, locally
development curriculum may not have had the follow-through desired, and yet, faculty members were able to express their desires or beliefs around commitment for this project clearly. As one faculty member summarized: “Should we be working closer in unison with each other or should we walk our separate ways? My thinking is I think it’s important that there should be a reasonable level of uniformity” (Interview 4:167). It was clear that for a mapping process to have an impact on agency in the form of ‘follow-through’ then faculty members must learn to at least walk in the same space and at times in the same direction:

You need to have people involved. Everybody has to be willing to put in an effort in that direction. Because you could do all this mapping with signatures and it could sit on the shelf.(Interview 3:212)

I think it’s a useful tool provided everybody jumps on board and everybody is interested and is eager to get something out of it. If you look at it just as another thing that you’ve got to do off the side of your desk, and maybe just go along just for the sake of going along with it, at the end of the day I don’t think we’re going to get a whole lot out of it because we always say that these are important but then we all go back and nobody does it. (Interview 5:271)

If we do something that’s meant to transform our students it has to also transform us because otherwise we’ll put on the illusion that we’re part of the process but we really haven’t changed. And if we haven’t changed, our curriculum is unlikely to change. (Interview 5:321)

The bar for curriculum mapping in this group was set very high and directly discussed faculty agency as a product of a successful process. If the process were successful, it was meant to change us and foster follow-through. In order to clear the high-bar set for the group, we also had to avoid the pitfalls and clear the hurdles identified by the group. The most commonly identified hurdle was the perceived time and opportunity cost of choosing this work over other work. If the process was not deemed worthwhile, the time cost and effort would undermine engagement and the results.
So I believe there’s a point of review that we have to do internally but I also believe there’s certainly an external element to our own growth. So in other words I’d say it’s probably going to conflict with this notion of professional development to a degree. (Interview 2:161)

If it’s a huge workload some people are not going to try to jump on board because of the time commitment. (Interview 5:247)

I think the biggest pitfall is time and - not necessarily time to get it done but time to get everyone’s idea, critically evaluate everyone’s idea, and critically bring into the equation what needs to be done. (Interview 8:339)

The first thing that comes to my mind in any of this sort of process is - and that - is the amount of time that we have to do it.(Interview 10:239)

From a participatory perspective, the pre-interviews and discussions prompted by asking faculty members what they want out of the process and what risks lay ahead on the journey was generative for articulating group goals, defining process and identifying risks to the project. Once established and fact checked with faculty members, the goals outlined above provided the comparative benchmark against which to present the resultant maps of the study, the process observations, and discuss the reflections from the post-project interviews.

**Mapping Product Results**

The products of this mapping project are the result of faculty efforts to capture curriculum data related to the identified goals of the project, namely the investigation of instructional and assessment methods used throughout the BPEC degree relating to the DCAS and SSS sophistication levels. To capture data on every course in the program 39 surveys were completed by 13 faculty members on 35 separate courses during the period of April 4-6, 2010 (see Figure 12 in the methodology chapter for a list of completed surveys). Data summaries were presented to faculty members immediately
in three forms: Currickit generated reports, Microsoft Excel graphs, and as visual maps created using Visual Understanding Environment Software from Tufts University.

Beginning with Currickit reports, Figure 13 represents the look of a typical report created using the survey results. The Currickit software and reports are a ‘drillable database’ that allows one to start at a macro-level question, such as, “Where in our program is written communication taught but not assessed, taught and assessed, not taught and assessed, or not taught and not assessed?” By following the links for one stream of data, for example, ‘written communication - taught and assessed’ a report like the one shown in Figure 13 can be created (see Appendix J for more examples of reports related to the DCAS competency of ‘written communication’).

Figure 13. Sample Currickit Report for DC Signature Item Written Communication (see Appendix J for expanded examples of Currickit reports on written communication)

<table>
<thead>
<tr>
<th>DC Signature: Written Communication - Taught &amp; Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 SPSC 1105 Introduction to the Study of Sport - LEC 002</td>
</tr>
<tr>
<td>02 SPSC 1164 Dynamics of Motor Skill Acquisition - LEC/LAB 001</td>
</tr>
<tr>
<td>03 SPSC 1192 Topics in Human Nutrition - LEC 001</td>
</tr>
<tr>
<td>04 SPSC 1311 Performance Analysis: Tennis Badminton - ACTIVITY 001</td>
</tr>
<tr>
<td>05 SPSC 1316 Movement Education/Gymnastics - ACTIVITY 001</td>
</tr>
<tr>
<td>06 SPSC 1317 Applied Methods: Dance - ACTIVITY 001</td>
</tr>
<tr>
<td>07 SPSC 2205 Leisure and Sport in Canadian Society - LEC 001</td>
</tr>
<tr>
<td>08 SPSC 2205 Leisure and Sport in Canadian Society - LEC 002</td>
</tr>
<tr>
<td>09 SPSC 2231 Sport and Exercise Psychology - LEC 001</td>
</tr>
<tr>
<td>10 SPSC 2252 Contemporary Health Issues - LEC 001</td>
</tr>
<tr>
<td>11 SPSC 2275 Physiology of Exercise and Training - LEC/LAB 001</td>
</tr>
<tr>
<td>12 SPSC 3158 Inclusive Physical Activity - LEC/ACTIVITY 001</td>
</tr>
<tr>
<td>13 SPSC 3203 Health Promotion - LEC 001</td>
</tr>
<tr>
<td>14 SPSC 3275 Advanced Physiology of Exercise and Training - LEC/LAB 001</td>
</tr>
<tr>
<td>15 SPSC 4199 Physical Education and Coaching Methods - LEC/ACTIVITY 001</td>
</tr>
<tr>
<td>16 SPSC 4231 Advanced Exercise and Sport Psychology - LEC 001</td>
</tr>
<tr>
<td>17 SPSC 4291 Curriculum and Planning Issues in PE and Coaching - SEM 001</td>
</tr>
</tbody>
</table>

At this level, one can click further into a course to see the instructional and assessment methods associated with written communication in a particular course.
There are dozens of pathways through the data of possible interest to faculty members. Figure 14 shows the results of a pathway starting in a report on the DCAS item *written communication*, then filtered using the specific instructional method of *self-reflection/journaling*. The resultant graph is a list of courses that may be used to identify a potential group of instructors who use self-reflection and journaling in the program. This level of detail is possible with any of the core competencies being mapped and instructional or assessment methods being investigated.

**Figure 14. Written Communication Taught or Assessed Using Written Communication**

<table>
<thead>
<tr>
<th>DC Signature: Written Communication Instructed By Self-reflection/Journal</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 SPSC 2231 Sport and Exercise Psychology - LEC 001</td>
</tr>
<tr>
<td>02 SPSC 2252 Contemporary Health Issues - LEC 001</td>
</tr>
<tr>
<td>03 SPSC 3158 Inclusive Physical Activity - LEC/ACTIVITY 001</td>
</tr>
<tr>
<td>04 SPSC 4231 Advanced Exercise and Sport Psychology - LEC 001</td>
</tr>
</tbody>
</table>

Sophistication of each competency provides an additional pathway for exploring the data. Three levels of sophistication were articulated for each competency based on the descriptions in the DCAS Framework Document (2007) (Appendix A). Level one outcomes represent an entry level sophistication and level three represent the highest level of outcomes for each competency. Figure 15 represents a report showing the courses in the BPEC program that were reported as having level three written communication outcomes.
In Figure 15 four of the courses identified are activity courses focused on applied learning relating to physical education instruction; SPSC 1311, 1313, 1317, and 2322). Although possible, it is unlikely that the assignments and instruction in these courses actually met the outcome as described in the DCAS Framework Document (2007):

Read and critically evaluate complex information and analysis specific to a discipline. Write competently in a variety of academic and/or workplace genres showing a sophisticated understanding of persuasive strategies and logical argumentation. Plan, write, and edit work to discipline standards. (p. 8)

While the data may not be representative of actual student experience in this report, the report itself is helpful for identifying faculty understanding of the curricular concepts brought into view by the process. In this case, faculty member understanding of written communication competencies needs more discussion and possibly some examples associated with the outcomes might enrich their application. The data concerns that arose were almost immediately identifiable by faculty members using the competency specific reports. This demonstrates that Currickit results, are transparent
enough to be used to bring attention to areas of misunderstanding or contention in the curriculum.

**Getting visual with results.**

By exporting the Currickit data for DCAS and SSS competency sophistication levels, instructional methods, and assessment methods into Microsoft excel, it was possible to create charts allowing for more visual representation of the curriculum. Figure 16 demonstrates a graph of competencies and their coverage within courses (taught or not; assessed or not). The graph is sorted using the category “not taught, but still assessed.” The competency with the highest level of not taught but assessed instances in courses is on the left of the chart. Written communication is the competency that faculty members assess but do not teach most often in the BPEC program. On the other end of the spectrum, qualitative inquiry was the concept neither taught nor assessed in the majority of BPEC courses.
Upon presentation of this specific graph during the May 6th discussion, written communication became a topic of general discussion with two key themes emerging upon review of the meeting notes: 1) faculty members were not entirely satisfied with the written communication of students, and in particular, their ability to write in a variety of formats and registers, and 2) explicit teaching of writing skills may have to become more common throughout the program due to the fact that students are required to take only two English courses in the BPEC program (one literary, one technical writing). As a result, this graph contributed to the establishment of written communication as the competency of interest for the next iteration of mapping discussed by the department for
post-research continuance of mapping (CMRP Report to SPSC Faculty #3, p. 2, Appendix J).

At the outset of the project when asked “What maps would be of most value?”, faculty members identified research related content, skills and abilities (CMRP Report to SPSC Faculty #1) as an area of interest. When presenting the data visually and accounting for the sophistication of qualitative and quantitative research methodology or content exposures, the data showed that there may be a miss-match between the number of experiences students have to develop research related thinking and skills and the expectations of faculty members. Figure 17 shows the program-wide sophistication coverage of all competencies sorted by an aggregate score giving one point to level one coverage, two points to level two, and three to level three coverage. The aggregate scores affirmed that the program has a high level of attention to practical concerns related to teaching and coaching and focuses less attention on qualitative and quantitative areas of competency. Quantitative reasoning and qualitative inquiry knowledge and skills had the two lowest aggregate coverage scores on the graph (Figure 19, right hand side).
Interestingly, the discussion that followed the presentation of this graph did not lead to a set of goals and outcomes to shift the program toward a more research-intensive program. The BPEC program was designed with a mandate to graduate competent and reflective physical educators and coaches; as a result, the competency bias reflected in Figure 17 was not a surprise to most faculty members by this point in the discussions. The group had reviewed program history on the first day of the intensive mapping phase, during which time a number of questions and discussions arose around program mandate. What did result from the review of Figure 17 was recognition that the group should consider refinement and continuity of delivery. In addition, a commitment was made to investigate the potential of adding an elective research course for those students wishing to pursue Master’s degrees. Underlying the
recommendations was the general concern relating to student continuity that was presented as a goal for the process at its outset:

*I used the analogy as any courses that you’re teaching it’s kind of an unfolding story that you’re telling the student. And in terms of statistics or research methods it’s been broken down in different courses so students read the story or they’re being told the story and then they have to wait. They read a few pages and then they have to wait a few months until they take another course to hear the rest of the story but they don’t even know the chapters online. Depending on the order of courses that they’re taking. So they might be - it might be chapter two first and then a couple of months later chapter one which makes it extremely difficult - yes we cover the material but we don’t see the connections because it’s broken down.* (Interview 11:453)

In addition to program representations of specific competencies and their sophistication, an accounting of the use of varied instructional methods (Figure 18) and assessment methods (Figure 19) were presented to faculty members in graph form and sorted from least used to most used. At the extreme of low usage, the methods and assessment techniques were powerful indicators of what does not occur in courses.
Instructionally, it was a surprise to faculty members how infrequently we rely on each other to come and guest speak in each other’s classes. This was followed by acknowledgement that there is a lot of expertise in our faculty that we should be taking better advantage of on an intra-department basis. As the discussion moved down the list of strategies from least used to most used, the discussion began to falter leading to the conclusion that beyond what is not used in the program, the graph is not detailed enough to provide insight. For example, every course except the eight service-learning courses in the program reported using lecture, however, there was no affordance for the
percentage of the course that relies on lecture as an instructional mode. As a result, instructors who lecture 25% of their course time were counted the same as those that lectured 100% of the time. Immediately the group dismissed this component of the Currickit data for making judgments regarding the general profile of instruction.
The assessment methods discussion was not dismissed as readily as the instructional methods discussion bringing truth to the oft’ used educational phrase “that which gets measured gets attention!” Each assessment method reported has a graded component associated with it resulting in a greater connection between what happens in courses and what was reported. For example, 31/35 courses reported having a
professionalism/contribution mark. Most faculty members shared the understanding that this is a limited mark, perhaps 10% of a total grade related to engagement with material, preparation, and contribution to the class discourse/community. Instead of dismissing the 31/35 number of instances, the group discussed how many times professionalism/contribution was assessed versus taught in the program using Figure 16. The fact that it was taught and assessed so frequently led to another discussion regarding whether it was being taught uniformly and whether it should be. Again, the limitations of time and treatment of this process as exploratory for defining future discussions led to a commitment to revisit the topic at future department meetings.

Assessment method results and discussions in general were treated differently than instructional method results. Beginning with the online survey there was an attention to fairness and consistency for students that underscored the discussions and faculty member reflections during the second interview:

When filling out the online part of [the survey], I was assessing something that I wasn’t teaching. And I think that it happened to all of us. So it’s really for me a reflection of ‘well I don’t think it’s necessarily fair to the student to assess something … I haven’t covered. (Interview 23:39)

The suggestion by the faculty member was that she would be removing professionalism as an assessed component of the course. The Currickit data and MS Excel graphs presented above are visual and manipulatable representations of curriculum data related to the BPEC program. Whether they count as maps, relies on whether or not someone can use them to navigate the BPEC curriculum and the associated competencies, the instructional methods, and the assessment methods in meaningful ways. The results showed meaningful reflection and pathways in and out of the data. From the perspective of creating areas of shared interest and groups, the
graphs and Currickit data showed significant promise. In terms of showing how a student progresses the program curriculum and experiences related competencies, the graphs and Currickit data did not represent a comprehensive view of student experience which takes into consideration temporal factors and pre-requisite structures in a degree.

**Getting more visual with the data – making maps.**

In order to move to a version of maps that attempts to represent the data from the Currickit survey in a familiar structure relating to the curriculum progressions of the program, the map presented in Figure 20 was created. Currickit data were exported to Microsoft Excell, then imported into Tuft University’s Visual Understanding Environment (VUE) software for manipulation. Within VUE, data can be organized as wished and linkages can be shown between data by selecting different nodes on the map and adjusting the degrees of ‘connectedness’ (connections are shown by blue lines).
Using the VUE software, the primary nodes of the map were identified as the courses in the program and were aligned horizontally by approximate semester and vertically organized into discipline similar or subject similar streams. In Figure 20, the left most column (blue nodes), for example, represents the service-learning courses in the program starting at first year on the top and ending in fourth year at the bottom. The large purple, orange, and blue boxes at the top represent three chosen competencies for demonstration: information literacy, technology literacy, and quantitative reasoning. Within each competency the numbers 0, 1, 2, 3 represent the level of coverage of the competency within a course. Zero is no coverage, while three represents the highest level of coverage. By clicking on any single node in the map, with one-degree of relatedness selected, you can see all the associated nodes that relate to your selection.
In the example, quantitative reasoning level three was selected, showing the courses that contain the competency, the instructor associated with it, other competencies housed in the same course, and the years in which that competency occurs.

This form of map and its potential uses for making groups, identifying competency progressions, identifying primary instructors for competencies, etc. was presented as the very last discussion item of the four day intensive period of mapping. It was presented as a demonstration without an extended discussion of its uses and was re-presented in the CMRP Report to Faculty Members #3 (Appendix J) prior to final interviews. The immediate response to the maps when presented in this form was best described as ‘relief’. Relief from the huge amounts of data represented in the graphs and tables used in the presentation of results using CurricKit tables and Excel graphs. The strength of this form curriculum representation is that it hangs on a familiar framework used for discussing the program. Course sequences, progressions, and graduating requirements represent the stable and non-shifting common ground of the program. By layering the competency, assessment, and instructional language over this layer the focus on the instructional layer became contextualized and grounded in the program structure layer.
As my proficiency improved at creating maps, the 2\textsuperscript{nd} generation of maps evolved to look like the one presented on December 10, 2010 during a regular faculty meeting (Figure 21). This map was used in the post-intensive phase of the project during a curriculum review meeting to discuss program level changes to entrance and graduation requirements under consideration. What is not visible in Figure 21 due to space consideration, is the list of graduating requirements on the right hand side of the map that when clicked on, highlight the courses needed to meet the requirement. Figure 21 does not include all the Currickit data collected for the reasons that will be discussed in the ‘data insights’ section below. The map in Figure 21 does represent how visual program mapping resulted in the creation of maps that became focal points for curriculum-related discussions. The ongoing use of maps for curriculum discussion, at least at the program level, demonstrates that as a product of curriculum inquiry, visual
maps representing a program landscape can become a tool for ongoing curriculum dialogue.

**Data insights.**

There are quantity and quality insights relating to the curriculum data that emerged from this study. The quantity of data was dictated by the number of competencies chosen to review (17), the number of sophistication levels (outcomes) for each competency (3), the number of instructional methods identified by instructors (22), the number of assessment methods identified by instructors (31) the number of courses in the program surveyed (35), and the number of instructors filling out surveys (13). The key indicator that this was simply too much resided in the fact that faculty were asked “Now what?”, the consensus was to pick one competency, focus the department’s efforts, and refine the process before biting off more than can be chewed (CMRP Report to SPSC Faculty #3). Without clear priorities, the amount of curriculum data and the possible implications of exploring it created an overwhelming sensation for the facilitator and the group. There was simply more data than could comfortably be processed in the time allotted.

The quality of the data was hinted at above and is best summarized by the old adage ‘quality in = quality out’. As demonstrated in the results related to the competency of written communication presented in Figure 15, the varying interpretations of a competency will come out in the results. Initial review of the results indicated some misunderstanding by a few faculty members of the written communication level three outcomes. As a product assessed in relation to its accuracy, the data in this respect were not of high quality, which undermined the subsequent ‘authority’ of the maps.
Authority is imbued into maps by trustworthy data. Trustworthy data relies on a shared consensus of how to describe local reality. Therefore, the value of curriculum representations, created using data that are locally produced, depends on the development of shared curriculum understanding that precedes data creation.

The second data-related insight requires a shift from viewing curriculum data as a product representing curriculum, to data creation as a process that leads to the necessary shared understanding required to create trust-worthy data. That is to say, the data must be allowed to evolve through refinement as the shared understanding of group members increases. From this perspective, the fact that the potential misunderstandings were made visible for discussion supports the tools and reports used in this exploratory project, but draws criticism towards the facilitation process undertaken. The facilitation process chosen for this project did not allow enough time to reiterate the learning within the group that arose as a result of clear misunderstandings in interpretation of definitions and curriculum items. First generation data were used to foster discussion, which is an excellent starting point to find misunderstandings, however, opportunities to refine data in light of new learning by group members were not present. The limits of using the first attempt or first generation data in the curriculum representation lead to reinforcement of the idea throughout the process that this project was an exploration of the merits and processes of mapping as much as it was a curriculum inquiry process.

There was some data involved in the process that were never questioned as accurate or contestable, which is also important to identify in this discussion. At the survey and mapping levels of the process, instructors were assigned courses for which
they were responsible for completing surveys based on consultations with the group. Based on the consultations and assignments, the program structure was laid out in both Currickit and VUE in order to organize both the input data and output of curriculum representations. The program structure, graduating requirements and which courses should be included in the mapping were never contested by faculty members throughout the process. Additionally, the DCAS competencies were not debated with the same level of interest as the SSS items, which were locally produced curriculum intentions. The most potent maps (VUE versions) were built on the least contestable layer, i.e. the fixed elements of the program in the form of courses, progressions and graduating requirements. This base acted as the familiar material foundation onto which competencies, instructional and assessment information could be topographically layered. In essence, it allowed faculty members to quickly situate themselves in the data relating to the overall curriculum landscape. The implications of this insight to curriculum development process are taken up further in Chapter 6.

Mapping Process Results

The results of the mapping process are considered in light of the desired goals for mapping as articulated by faculty members during pre-project interviews. The process results are informed by 1) the facilitator’s reflections, 2) the participant-validated observations presented to faculty members in the form of CMRP reports to Sport Science Faculty members one, two, and three, 3) the products produced by the process described above, and 4) the faculty member post-project reflective interviews. To organize the process results, the specific goals set out by faculty members are revisited below and used as sub-heading throughout this section:
• foster dialogue and be an open space for new ideas,
• foster shared understanding of local curriculum,
• respect faculty time and commitment required to do the work,
• lead to the development of shared curriculum goals,
• respect varying levels of curriculum knowledge (both local and general) amongst participants, and
• foster accountability and follow-through in relation to departmental curriculum goals.

Foster dialogue and be an open space for new ideas.

There was a specific question posed in the post-mapping reflective interviews regarding whether or not the process fostered dialogue. Unanimously, faculty members responded positively that the process was effective for fostering dialogue. However, the amount of dialogue was also uniformly considered insufficient to reach truly shared understanding across all the competency areas, instructional methods, and assessment methods. Shared consensus requires rich discussion. Rich discussion by a group requires time, trust, listening, engagement, leadership, facilitation, patience and more. The main component missing in this exploratory project was time. There was ample evidence of trust, engagement, and other pre-requisites of a healthy group dialogue. Dialogue that is naturally concluded feels very different than dialogue forced into a fixed time slot. “I would have loved to have had more discussion because we were definitely tapping into things that we could get more discussion from and I think more time needs to be spent with a day of reflection in between” (Interview 18:23). Another faculty member described the process as an opening to the questions that required more dialogue.
We had dialogue but is it perhaps possible that the dialogue got us to a point of realizing maybe what we need to dialogue about? ... I sensed frustration. I felt frustration sometimes that - more time was needed and yet time is passing. (Interview 19:35)

Although most comments pointed to the discussions being a rich source of dialogue, two faculty members did mention that large group discussion needs facilitating in specific ways to avoid the dominant voices of the department having too much input.

Sometimes it’s hard to share your opinion when there’s very strong personality ... it was all done in a very respectful way and I can’t think of anything specifically that could have led to this. But we have some stronger personality types in the group. And those are often the ones that have the final word or the final say. (Interview 23:249)

Another faculty member who’s courses don’t predominantly deal with ‘written communication’ competencies made a comment that points to the social risk of dialoging outside one’s area of expertise:

If you put thirteen people in a room and maybe some people probably don’t have ground breaking things to share are they going to walk in on a meeting feeling invaluable? Or think that everybody else looks down on them because they weren’t able to share some kind of groundbreaking method for evaluating written communication. Right? So that’s the difficulty - in the sharing process. (Interview 17:281)

In spite of these two comments related to the social risks involved in curriculum dialogue, the potential for the process to stimulate dialogue was undeniable and confirmed by the wishes for more time committed to discussion and the desire to continue the process after the research phase is over (CMRP Report to SPSC Faculty #3, Appendix J). What was also clear from the process is that fostering rich dialogue with a large group requires careful facilitation and is not a neutral process. Ironically, the slightly rushed feeling that was a unanimous concern over the four day intensive process was a design and facilitation response to faculty members’ requests during interview one for a process that was respectful of faculty members’ time and the commitment required to do the work. The implication here may be that ‘buy-in’ and
‘commitment’ to the process leading to requests for more time occurred after the process was started and the value of the process to individuals began to emerge.

**Respect faculty time and commitment required to do the work.**

In short, this project afforded too little time to curriculum discussions in light of the breadth of competencies, instructional and assessment topics that were being attempted in the mapping process. The immersion format for learning about mapping was successful according to the post-project interviews, however, it also left unfinished business. As one faculty member suggested, we should have “hit it ... over two weeks instead of one,” which would allow us “more time ... with a day of reflection in between” (Interview 18:23). A solution discussed in more detail in subsequent chapters is that significantly more time visiting the competencies in regular meetings leading up to the intensive mapping phase would allow faculty members who need more time to review and understand specific competencies the opportunity to develop the necessary background knowledge needed to move the process forward more quickly. Recognition that the process did not fully meet the group’s expectations came at what might best be called an “interview reversal.” At the end of a reflective interview a faculty member asked me what I would do differently if I could do it again. My response captures the distance I think we travelled given the time and process we chose:

> Well if I could do it all again I would - pre load the work we had into the mapping software like VUE. And I would have gone with the visual. And shown people some of the information we could glean ... so people had some sort of understanding of what sort of potentiality there is instead of requiring a leap of faith ... what I asked was a big leap of faith that if you do all this work I think we’ll come out on the other side of something valuable. Trust me! That’s a big ask for people who are busy and used to having free time. If we were all nine to five clock punchers and I was paying you to be there every day it would be like, “yeah, have a free lunch ...” But that’s not how we work. So I would have started with some better examples and maps. And then I would have had that
discussion time that you brought up... People would have been very differently activated to go beyond reaching the gates to our shared village. Which is sort of where I feel like we are now. We are all sort of at the gate and we all know that the village exists. We know some of the component names. But we have to explore them. So we have all these - great structures. Cultural spaces. Things going on. Everyone has some ownership over each different space. But we haven’t really gone and lived in that space together. (Interview 19:247)

By keeping the intensive phase of the mapping to a one week process while also trying to bring faculty members with a variety of backgrounds together, we achieved some shared understanding relating to program history and structure, however, this is understanding that could have been developed prior to the mapping process. A richer understanding of competencies, instructional and assessment methods could have been developed prior to the intensive discussion, curriculum survey, and results discussion phases. To be clear, the results were supportive of an intensive component wherein faculty worked together on the mapping and survey portions of the process, however, the quality of that time and the results it produces are directly related to the preparation and dialogue preceding the intensive period and aimed at developing necessary background knowledge.

Foster shared understanding of local curriculum.

Individuals involved in the mapping process had been with the department from two to forty years. The “local BPEC curriculum” under discussion in this mapping was developed between 2005 and 2007, with first implementation occurring between 2007 and 2009. In addition, the Douglas College Academic Signature was developed and popularized in the College between 2006 and 2008 and received little College-wide discussion or promotion beyond 2008. The impact of these circumstances was a need to develop background knowledge for some faculty members and to start the process
by discussing the history of the program, the mandate of program, and the facets of the DCAS and SSS competencies. This recommendation for process was recorded after the first set of interviews and member-checked with faculty members in the ‘CMRP Report to Faculty Members #1’ (Appendix D).

To illustrate the initial state of shared understanding regarding the DCAS, when asked about the competencies during first interviews, none of the 12 faculty members could recall more than one or two of the DCAS or SSS items without prompting. With prompting, discussion was limited to those competencies raised by the interviewee. When asked, “can you tell me about the Academic Signature items in your course(s)?” a faculty member with two years experience stated the following:

> On top of my head I can’t even remember the different components that were included in there. To be honest the first time that I heard about academic signature - was when we had our faculty meeting and we were told that we were required to do those [Account for the items in courses for the Dean’s office in 2009]. And then I actually read the document and tried to follow direction. Found it extremely confusing for the first time doing it but honestly I can’t remember any - I think that there’s three different categories and I can’t remember what they are. (Interview 11:153; parenthesis added)

This response and the fact that experienced faculty members who had worked with the DCAS and helped develop the SSS were all unable to recall the signature items demonstrates the initial state of shared understanding, or more accurately, shared non-understanding of the meta-curriculum competencies. In addition, not all faculty members were fully aware of the history or mandate of the program. In her second interview the same individual from the first interview above reported the following about the mapping process:

> Interviewee: So in terms of everything that we discussed it was all new to me. So I learned a lot and I also learned that there are lots of things - there’s still a lot of work to be done but that the outcome seems very appealing.
Interviewer: OK. Speaking of BPEC curriculum itself, did you learn anything not signature specific that came out of the process?

Interviewee: I learned the origins. The decisions that led to the selection of specific courses which again I wasn’t aware of. So that was ... really good. That was an eye opener for me. So now I understand decisions that were made a lot better. So I think that - that’s why it was quite valuable for me. So it’s all information and discussion that I had never been part of. So it was nice to really get to know that. (Interview 23:13-15)

Shared understanding was achieved through the process, however, it was not as detailed as necessary to create fully trustworthy maps of the DCAS and SSS on the first attempt. What was clearly achieved was new understanding for many of the involved members regarding program history, broad definitions of competencies, program mandate (context), and program structure. This new understanding became the foundation for discussion in the program and the launching point for subsequent inquiry.

The limit of this shared understanding was felt when the group reviewed the data from Currickit and discussed the sophistication of competencies reported; namely in relation to written communication which was the sample examined across mapping forms. The following exchange captures how the lack of shared understanding achieved around competencies, instructional and assessment methods created concerns during the process:

Interviewer: The - other word you used was murkiness. So some - things emerged that were murky. Tell me more about that.

Interviewee: Well, seemed to me that murkiness came about in trying to figure out what’s meant by some of the terms. In terms of some of the signature items. What’s meant by those terms? How do we interpret those? - And it just kind of gets slippery in terms of well I think it’s this. I think it’s this. You know? - And then when we did try and do some mapping it was well what does that term really mean? And so I think then as soon as you’re on a slippery slope everything just starts (laughing) moving around. And so it seemed like the ground was moving from underneath us at times. (Interview 19:21-23)
Due to the participatory and social nature of the methodology of this project, shared understanding was not conceived as a fixed target or pre-conceived body of knowledge that must be acquired. What emerged as a result was the importance of stable constructs and definitions that gain their mass and inertia by discussion and agreement. The agreement must be strong enough so that group members feel they are using the same language to describe the same educational events. Quantification of curriculum experiences requires stable definitions and this level of agreement because quantification is a leveraging event. Lack of agreement led to the feelings of ‘murkiness’ and ‘shifting ground’ that occurred when the quantification steps of the process began. Entering curriculum data into a survey forced faculty members to consider the qualities of the curriculum phenomenon in question and assess them against their course and the checkboxes of the software. When misunderstanding or doubt enters the system at this moment, overall trust in the data of both self and others comes into question. Put most succinctly; trust in curriculum data requires an acknowledged shared understanding of the curriculum concepts involved.

From this view the mapping process (leveraging) brought to light the areas where shared understanding was stable and where it was still under negotiation. Remembering that this was an exploratory project, an alternate way to look at the results is that the process was incomplete. This project brought us to the point of knowing where the misunderstandings were, however, time was not allotted after this. The assessment that the curriculum data were useful, but required refining was shared by facilitator and faculty members alike and helped shape the emergent curriculum goals for the group stated at the end of the project.
**Shared curriculum goals.**

At the end of the intensive phase, the faculty did come to a consensus around “Where to go from here?” It was determined that *written communication* should be the first DCAS competency revisited by the department in an extended process that included external consultations on performance standards, the development of examples relevant to competencies, and ongoing discussion at the regular department meetings regarding written communication until the process had run its course (CMRP Report to SPSC Faculty #3). The goal was partially related to a desire to further explore written communication while narrowing the scope of curriculum mapping in order to “prove the process” before driving it forward at full speed. The goal represented a validation of the perceived value of mapping and maps to faculty members with recognition that the exploratory process was a good first attempt, but also required further refinement.

The second major shared curriculum goal that emerged from the process was the addition of a new competency to the Sport Science Signature (SSS). The idea of a qualitative inquiry competency (signature item) was introduced during discussions of the SSS to counter-balance the DCAS. The perception presented by the faculty member introducing the idea was that the DCAS was biased in favour of quantitative research and as a result privileged certain forms of knowing over others. The faculty discussed the topic and by consensus approved the addition. While all the SSS items represent locally derived program goals expressed in the form of competencies and outcomes, the addition of qualitative inquiry was the first new curriculum goal set by this group in its entirety. Qualitative inquiry was not only a locally derived shared goal for the program,
but was also a locally developed response to what was seen as a delegitimizing omission on the part of the DCAS. The impact on faculty member’s attention to qualitative inquiry based on the addition to the SSS was immediate. During the post-mapping reflective interviews, seven faculty members mentioned the competency when discussing their course curriculum or things they learned during the mapping process. In the pre-interviews only one faculty member mentioned qualitative inquiry.

Mapping as part of a curriculum development process is based on designing curriculum and pathways to graduate the ideal candidates from a program. As a result, the discussion is naturally geared towards answering the question: What are we trying to do in our program? The results or the discussion become the explicitly shared curriculum goals that bridge individual course interests. In this study, the ongoing development of the Sport Science Signature and the desire of the faculty members to look more deeply into written communication both point to the ability of the process to foster the development of shared curriculum goals.

**Respect varying levels of curriculum knowledge.**

Faculty members in the Sport Science department represent an inter-disciplinary group with varying levels of experience and varying levels of curriculum and pedagogy theoretical and practical exposures. It was evident that this variety can be a challenge to engagement for faculty members or lead to some insecurity when questions are dealt with as a group.

*If you put thirteen people in a room and maybe some people probably don’t have ground breaking things to share are they going to walk in on a meeting feeling invaluable? Or think that everybody else looks down on them because they weren’t able to share some kind of groundbreaking method for evaluating written communication. Right? So that’s the difficult - in the sharing process. (Interview 17:281)*
This comment represents the complexity of facilitating for such a diverse group. In order to value all members, initiatives such as breaking into smaller groups and allowing faculty members to give feedback using a nominal technique were used on the second day of discussions when the signature items were under review. For some, the process of accommodating new faculty members and having to explain the curriculum terminology and theory involved in the process was too long. In essence, the discussion had to go too far back in our history and revisit too many previous discussions to bring new faculty members to the same level of understanding as those that were there from the beginning of development and implementation of the degree:

*I think there has to be a plan for when faculty changes over that we don’t go all the way back to root again and yet you really need to have a group that’s on the same page and all caught up to speed and - you know like there has to be a process where you bring the newbies in so we don’t have to go back and catch them up again because then we won’t make progress.* (Interview 18:283)

*Showing for example a new faculty coming in ... “OK here’s the curriculum. Right? Here’s the signatures. And this is where the signatures fit into the curriculum ... and this is the level of expectation to be able to speak and communicate at. This is where we’re doing it.”* (Interview 22:141)

These responses were also paired in the same interviews with comments that more discussion time was needed. Part of the frustration of going ‘back to square one’ is that it consumed valuable curriculum discussion and analysis time. In addition, these individuals may have been more engaged during the historical review and DCAS and SSS orientation had they been provided with more leadership opportunities during the early group discussions. In spite of the possible concerns of taking time to develop program background knowledge for new faculty members, the process of enculturation was working by the middle of the second day. New faculty members were able to contribute significantly more to the conversation by this point creating a richer
discussion and the opportunity to value more group members’ contributions throughout the conversations.

It can be concluded that the new faculty members and those needing review had a process that suited their needs while those with long memories and more curriculum experience may have felt that time could have been better spent on dialogue and analysis of the results. For both groups, however, the process and group facilitation was seen as respectful. There were no facilitation complaints or remarks about discussions or facilitation gone awry during the second round interviews. In addition, other than meeting/cognitive fatigue, there were no significant moments of conflict noticeable throughout the 4 days of intensive mapping.

**Foster accountability and follow-through.**

Returning to the fact that curriculum mapping is an effective process for identifying and developing shared curriculum goals, the counter-balancing wish that faculty members expressed in their pre-interviews was that the process fosters accountability and follow-through by group members. The overall connection of mapping and accountability was nicely stated by a faculty member during second interviews.

*What if the mapping process sort of - dies down? Then the potential for accountability dies down too. Right? Now what if ... [it makes our actions] more public. What is taking place and what’s not taking place. So that’s how it can make a person more accountable or our program more accountable. (Interview 15:95, parenthesis added)*

This quote and others were in response to an explicit question added to the second interview asking how accountability is generated, if at all, by the mapping
The key links that emerged from faculty interviews were the role of transparency, intra-course connections, and public accountability.

In a second year course I want to know that that was done at the first year level explicitly by the instructor ... If they say “we’re looking at spoken communication in the first year course” [I want to know] that it was not just sort of “well - I think I put it in there”. ..What was actually assessed? [I want to know] the students were given feedback on how their spoken communication was. (Interview 22:141 parenthesis added)

The accountability developed was not in relation to institutional or societal goals, but instead, maps represent accountability to other faculty members and program goals. Maps with meta-curriculum and program goals draw connections from my course to yours.

And you know what. I think as a professional if you saw the map, you would buy into the letting go a lot easier. It’s when you don’t really know. “Oh yeah we had that meeting and so and so said they were going to do that” an you you’re like “ya, what are the chances that is really going to happen.” But where there is a department mapping process and then you can say, “I’ve got some second year students in my class and I challenge them to do this content but they didn’t have the pre-requisite skills, let’s talk about the first year. What is happening in those first year courses.” Do you see what I mean, you have something to peek into to say a) if it is being done well and if it is not, how can we maybe tweak it to better prepare them for their second year and then third etc. (Interview 13:19)

In addition to accountability to each other, two faculty members also recognized the internal motivational aspects of being exposed to goals that are greater than oneself. The power of mapping for these individuals was to bring these goals to the foreground so they could be assessed as valuable or not by the individual.

I think the most important thing in accountability would be value of process. If I feel this process is very, very valuable I am more internally motivated to be accountable myself. I’m really, really on board. I think this is incredibly important in fourth year. Am I doing what as a graduate student we want him to have?... I’m going to step it up a notch and I’m going to try to give a little bit more feedback on this. (Interview 17:169)

In order to foster ongoing accountability the mapping process had to 1) produce trustworthy maps, and 2) be seen as valuable by the individual. If these two criteria are
met, then ongoing attention to the shared goals presented in maps was seen as a potential pathway to increasing faculty member accountability to shared goals. In many ways a well constructed map can be seen as giving role clarity to individual faculty members with regard to their contribution to the overall shared goal of graduating a specific quality of graduate capable of a set of competencies promoted throughout their degree experience.

**Results Relating to Faculty Agency**

This research and project was constructed with the intention of investigating the relationship between the curriculum development process of mapping and faculty agency when undertaken using public sphere thinking. The context in which this purpose was derived was introduced in Chapter 1 and involves five new faculty members joining the department in the past four years. Within this context, designing a process to positively influence individual faculty member agency and attempt to enhance existing working relationships was deemed to be both an instrumental and ethical responsibility due to the workplace based nature of the project. Envisioning a process having positive outcomes and wishing for them, does not guarantee those results. It was entirely possible that methodology and framework meant to open curriculum dialogue would be considered an encroachment on previously private intellectual and practical concerns. With this backdrop in mind, the following section discusses findings related to faculty member agency. In order to present results in meaningful detail, Alexander’s (2005) pre-requisites of agency; understanding, beliefs (and strong assessment), and perceived freedom are used as sub-headings for organizing the results.
Impacts on faculty agency – perceived freedom.

The curriculum discussions involved in this project raised a number of considerations relating specifically to faculty members’ perceived curriculum-related freedom. Faculty members who taught university transfer courses in the first two years of the BPEC degree discussed limitations on their freedom as a result of being a ‘sending institution’ within the British Columbia transfer system. Although these connections were not part of the immediate mapping project, the presence of external obligations was a factor raised without prompting by faculty members. While external constraints due to articulation were not predicted to be a perceived freedom consideration relating to this internal mapping project, the possibility did exist that newly identified intra-program responsibilities uncovered during the mapping process would be perceived as negatively constraining. The opposite turned out to be true: clarity regarding individual course DCAS and SSS responsibilities freed faculty members from feelings of unnecessary responsibility and overload related covering all the competencies.

During both the pre- and post-interviews with faculty members the issue of restrictions on curriculum due to articulation commitments with external institutions was raised without prompting or solicitation. The four faculty members who raised this issue in conversation predominantly taught first and second year courses. When discussing potential hurdles or pitfalls that may effect the process in interview one, an experienced faculty member stated the following:

*Plus the other caution is BCPEKA and articulation. ... As these changes occur we have to keep in mind that students may not stay with us, they may transfer and you’ve got general studies students, Sport Science students, and BPEC all in the same group.*

(Interview 1:282)
Other faculty members recognized the difference between first and second year courses and third and fourth year course in the BPEC. First and second courses transfer throughout the BC institutional system, while third and fourth year courses are locally designed to meet desired BPEC program ends:

*But what I also find that is a little different here is in terms of what is the predominant driving force behind certain courses. Biomechanics is a great example [first year course]. What drives that course? There are some politics involved there. It’s driven predominantly from what comes up out of UBC. (Interview 3:128, parenthesis added)*

*The content because of where we’re at is we don’t have a lot of room to play because we really need to be fairly closely associated with SFU, UBC and that kind of a thing. So we have restrictions. We have sort of parameters of where we can be or what we should be able to deliver in these courses. So it’s not so much the content that we’re really super free with. It’s more of the delivery of the content that I think plays more of a role. (Interview 10:175)*

The articulation relationship with external institutions is not simply one of perceived limits on freedom, the connection is motivating for instructors to ensure that students from Douglas College receive a quality education regardless of where they start their degree.

*I challenge them hard because it’s a course that can transfer to UBC and I don’t want the students to go there and be below average or below level that where they should be at ...*

*Same thing if they decide to transfer to UBC. I never want them to feel that they don’t know as much as students that started first year at UBC.(Interview 11:277,301)*

The relationship of curriculum mapping, articulation, and perceived freedom also had a surprising twist. The obvious sentiment, as expressed above, was that we are limited in our freedoms in transfer courses, and therefore, changes that result from a mapping process must be acceptable with regard to meeting the expectations of receiving institutions. The twist that emerged was that maps were also held out as a possible legitimizing tool for our curriculum when communicating with other institutions.
Maps showing program overviews and how experiences are distributed across courses may ultimately increase our freedom by way of their communicative power.

We always have to bear in mind that we are a transferring institution. We can’t rock the boat too much because I think we have a fairly good relationship with UBC, UVIC and so on. And we have to bear in mind that we might be aware that in our assessment, let me give an example from our skill analysis courses that we are set up in such a way that there isn’t too much redundancy. But if we send a course outlines up and to them and it is appear to have gaps. They have to be aware that our students are getting a package. One particular course might appear as weaknesses, it’s been made up for in another course. So we have to be aware of that fact. How does this articulate? We’ve got to actually see the big picture. And so we’ll do that. We’ll show with the articulation and people will understand. And I think if we educate the institution that we transfer to, then I think they will say kudos to you. (Interview 4:215)

The idea that maps are an external referent with authority represented a hope held out by the faculty member that well constructed maps were going to be a communication tool leading to increasing independence. The relationship between articulation concerns, mapping, and perceived freedom were particularly relevant to a few faculty members, whereas the intra-program relationships (within BPEC) that emerged during discussions and mapping were of relevance to all the faculty members involved.

As an example of intra-program connections, the DCAS competency of qualitative reasoning was chosen to demonstrate visual maps created by VUE software as presented in Figure 20. By clicking on the competency tab on the interactive map relating to levels one, two, and three, the highlighted courses and blue lines show streams of content, assessment, and instructional methods directly connected to the chosen level of quantitative reasoning. The courses in the figure are arranged in pre-requisite groupings by colour with year one at the top of the figure and year four at the bottom. Within each column, a logical progression of competencies from level zero to
three becomes identifiable. This layout allows faculty members to not only see their courses and how they connect to the overall competency component, but also quickly identify connections between their level of competency and the surrounding levels.

**Figure 22. Curriculum Map Highlighting Level 3 Quantitative Reasoning**

The student journey became more understandable to faculty members using the visual layout of courses and interactive competencies on the map. When considering how the mapping process impacted understanding, faculty members identified the ability to identify progressions, omissions, and overlap as an important quality of maps.

*And you have no clue what anybody else is doing and you feel like you have to take it all on, right? And visually seeing where they get this. Then you understand what they’re coming to you with and you can work from there.... That’s what progressions are about, right!* (Interview 18:197)
And this is where the mapping sort of showed us that as a tool it can be very useful in showing us those patterns and looking at - did we meet all of the things that we wanted to do? Are we progressing our students - from level one Critical Thinking to level two Critical Thinking? Level three Critical Thinking? Are we progressing it through appropriately? In the appropriate courses? And that’s what that whole complex mapping comes in at that process obviously so you know this is what’s capable of doing and we can look back and say Yes we are doing those things. (Interview 22:15)

Gaining new intra-program understanding of competency relationships was deemed to be a positive influence on faculty members perceived freedom. The most grounded coding theme relating to perceived freedom (19 quotes) related to the fact that increasing understanding increases perceived freedom. Mapping, including demonstration of the links between courses helped to create role clarity. The information provided by maps became an enabling constraint as opposed to a restrictive one. In the face of overwhelming amounts of information relating to dozens of courses, the DCAS and SSS competencies, and dozens more instructional and assessment methods identified in the program, simply knowing what competencies were deemed important by the group for a course to cover allowed the instructor freedom to pursue those more deeply and let go of others. When asked about the impacts of the mapping process a faculty member with two years experience stated:

That’s a good question too because originally when I started looking at the program before not being knowledgeable where everything was - and looking at the signature items - and other people’s - signature items before we had the conversations you start questioning. Oh my God. Should I be doing more? (Interview 15:177)

I’d rather have my students go into depth in a couple of areas and come out with something solid. And then within the course itself certain courses will have that - a greater opportunity to do - greater things. (Interview 15: 213)

When asked whether all signature items should be addressed in a single course, faculty responded unanimously that it was unnecessary and they wanted the freedom to pursue more deeply those important to their specific course.
I don’t think we should address them *Signature items* all in one course. ... I think that that’s the whole idea about maps. You can see where certain ones are stressed and others are not so much. And that allows you to really deal with them in a good way. (Interview 18:147, parenthesis added)

Maybe it seemed the mapping might have helped have a sense of “OK ... some of those things are being covered over in these courses. So why don’t I make sure that I work really well on these sorts of things?” (Interview 19:193)

Because if I know where I fit in the program I wouldn’t go to something that is not necessary to spend time on. I would be more thorough and more deep. (Interview 24:155)

In spite of the flaws relating to data quality identified in the exploratory project maps developed for this project, the potential impact on agency with regard to developing feelings of perceived curriculum-related freedom persisted. At the outset of this project, it was entirely plausible to imagine that mapping of competencies and the fore-grounding of connections between courses would lead to feelings of curriculum restriction. The results showed the opposite was true. Bringing more clarity to the connections and responsibilities of each course was seen as a positive outcome by all faculty members. The potential reasons for this positive impact can be linked to the methodology of the project which is discussed further in subsequent chapters and changes in curriculum understanding that can be linked to the mapping process.

Impacts on faculty agency – levels of understanding.

Knowledge and understanding developed by faculty members during this project can be separated into 1) what was learned about the curriculum and pedagogy surrounding the BPEC program, and 2) what was learned about curriculum development processes by the group. Both have a potential and profound impact on how curriculum-related agency may manifest itself within the Sport Science department in the future.
What was learned about BPEC curriculum and pedagogy?

There were clear increases in knowledge and understanding of the BPEC curriculum that occurred as a result of this mapping project. The DCAS and SSS were introduced to four faculty members who had no significant prior exposure to these curriculum constructs that were supposedly embedded throughout the program. In addition, the history of the BPEC program and its mandate were new to some of the department members not present during degree development. When asked what was learned about the BPEC curriculum or the DCAS, one new faculty member stated:

*I actually learned a lot because everything that we talked about I was not really aware of ... So in terms of everything that we discussed it was all new to me. ... there’s still a lot of work to be done but that the outcome seems very appealing ... I learned the origins. The decisions that led to the selection of specific courses which again I wasn’t aware of. ... That was an eye opener for me. So now I understand decisions that were made a lot better. So I think that - that’s why it was quite valuable for me. So it’s all information discussions that I had never been part of. So it was nice to really get to know that. (Interview 23:15)*

*Well like any other learning process it was a really good first step for me but it raised more questions than I had in the first place. So when you don’t know that something is out there, you have very few questions, right? (Interview 23:269)*

Another new faculty member who was less direct about what he learned, but noted that he was unaware of the Sport Science Signature items in interview one was able to clearly identify the dominant signature items in his courses during his post-mapping interview:

*I would say the main signature items where the - Teamwork group aspect. ... Level two for sure on that in terms of you know working within a group and then individually. (Interview 15:149)*

As an induction process to the BPEC curriculum landscape, mapping was very intense yet successful. By the end of the fourth day of the facilitation, more members of the faculty were contributing to discussions and considering the implications of mapping
and the definitions of the signature items. The distribution of new understanding may have been uneven within the group, however, it is apparent that in some cases new knowledge gained by members contributed directly to their agency.

I now have a better understanding of what others are doing in terms of the data that was presented during the work week. Which is nice because - it helps me sort of be a little more adventurous in terms of how I present a course and what I mean by adventurous is simply not necessarily going out of the curriculum guidelines [CG] per se but looking within the CG and ... taking a little chance ... you know let's try this here. (Interview 14:75)

The knowledge and understanding gained during the discussion phases of the process was driven by peer-to-peer dialogue, whereas the preliminary introduction and historical background to the program was provided by the facilitator. The peer-to-peer process for acquiring new knowledge was valuable due to recognition of varied backgrounds and expertise within the department.

Well I think actually from our mapping process because we had the whole department together if anything I got to learn more about individual concerns like from - so called experts from certain subject areas and all of the things that take place within - all the different areas that we - teach. (Interview 15:7)

Knowledge being shared across the department was not limited to the DCAS and SSS. The discussions surrounding instructional and assessment methods brought to light new methods previously not shared within the department (see Appendix H for full listing). When asked about teaching and assessment methods and whether they were all familiar, one faculty member responded that “some of the assessment methods I'm very familiar with, but then there are others that I'd love to try” (Interview 14:55).

In contrast to the professed impact of new understanding on agency, there was also evidence that one-shot mapping alone cannot bring the attention to meta-curriculum items needed to create a lasting impression. There were a number of
instances during the second interviews when faculty members could not remember DCAS or SSS items:

_Oh God. So now I need to remember exactly what they were. In terms of - I’m not sure that’s not what it’s called but - Logical Thinking or I think that’s um..._ (Interview 23:75)

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_Interviewer: Are you having trouble remember the specific signatures?_

_Interviewee: Yeah. I’m having trouble remembering. Which ones are specific to - Sport Science and which ones are Douglas College? (Interview 22:38)_

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_Interviewer: Well yeah. Well pick this - pick the signature items and tell me how they relate to that course now.

_Interviewee: OK. Hmmm. Do you have a list of those signature items? (Interview 14:170)_

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_Interviewer: OK. And tell me about the Douglas College and Sport Science signature and how they fit in there.

_Interviewee: (Laughing). You’re testing me! Give me a couple more minutes. Because I don’t know - can I get onto the internet here for a quick second? (Interview 17:315)_

The pattern of not being able to recall the DCAS and SSS items of relevance emerged after the first few interviews. As a result, when discussing the signature items in subsequent interviews, faculty members were asked why the DCAS and SSS terminology are so hard to remember in an effort to try to gain deeper insight:

_Interviewer: Now when I asked you - remember these? You didn’t remember them. You wanted to see a list. And I just want to ask you - reflectively why do you think the signature is hard to remember?_

_Interviewee: I think part of it is we’re not - really - geared towards the signature. Like our teaching isn’t necessarily geared towards the signature element per se. and maybe to clarify that part of it is - although the signature has been around now for a couple of years there doesn’t seem to be any mandate or maybe direction as to how best to integrate that within the course. ... It’s not really mandatory. And I think until we as a department or the college really makes it mandatory for it to be included if not in the
course syllabus at least the curriculum guideline. And maybe it’s there but you know it’s - not anything that we really share with students. (Interview 14:227)

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Interviewer: Yeah, everyone is interested in them, everyone wants to profess to doing certain pieces of them, but why when we ask each other about them, we can’t remember the names of them even? What’s your personal feeling on the remembrance of words like information literacy ... just in a reflective sense?

Interviewee: ... there is nothing tangible in my opinion to hold on to when we talk about these words, these themes. There isn’t a standard we have to meet or a percentage of time we have to spend. I think as faculty and as students, and I think it’s equally important that the students know what we are trying to accomplish and if the specifics fall out of that, then you’re more likely it’s going to infiltrate your day-to-day conversation within class, within lectures, within lectures within group work ... But, we haven’t gotten to that place because there is nothing to hold onto yet for each one. Does that make any sense? (Interview 13:128)

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Interviewer: when we talked about it [the signature items] - when - I asked you to recall in a way - it’s hard to recall the specific terms and the - detail of how our course fits with these things. I can assure you you’re not alone. Myself included. And I - wonder about something. I wonder about how you feel about why it’s hard to recall it?

Interviewee: ... I haven’t - worked with this a lot. So It’s not - there in the forefront of - my mind for recall of all the information. Had you asked me three or four days after we did the mapping thing obviously - my recall would have been a lot better. After - what’s it been now? A month and maybe a little bit more than a month sort of deal? ...I also think ... there’s so much there. I mean you just hear (counting) there’s nine specific things. Plus we have our Sport Science specific ones. That’s just a lot of - specific detail to remember. (Interview 22:115)

After reviewing the interviews it was clear that awareness of competencies related to the DCAS and SSS had risen for all faculty members, but the meta-curriculum competencies remained periphery to discipline-based core curriculum of individual courses. The analysis showed that to raise the prominence of signature items for faculty members additional discussions and processes for valuing the DCAS and SSS within the department would be needed. To summarize the impacts of the process on understanding of curriculum and pedagogy the attention given to curriculum items
during this mapping project brought newer faculty members to the base-level of program understanding needed to engage in discussions. In this regard, mapping can be said to have contributed to the pre-requisite understanding necessary for future agency.

What was also clear from looking at the qualities and persistence of new understanding was that mapping is only one part of a larger curriculum development process if lasting attention to meta-curriculum items is desired. The larger process must involve ongoing dialogue and application of concepts to student experience. As one faculty member said, “if you say something often enough, people are going to believe it” (Interview 16:90).

**What was learned about curriculum development that may impact faculty agency?**

The ‘murkiness’ of the curriculum data and the fact that there were individuals clearly out-of-step with the group regarding how certain competencies, instructional methods and assessment methods were understood by the majority contributed to the group understanding that future curriculum development requires more discussion time and ongoing attention to items deemed important to the department. Individual faculty member agency in this project was situated within a public sphere understanding of curriculum and curriculum development. From this perspective, learning how to develop shared understanding by the department as a whole is an important outcome achieved by the group. Two significant process insights were shared by group members: 1) there is no point in proceeding with initiatives unless true shared understanding is achieved through dialogue, and 2) ongoing attention needs to be devoted by the department to that which it deems valuable. The need for the mapping process to have more time for
discussion and rumination was consistent across department members and is captured nicely in the following quote:

*I would have loved to have had more discussion[about instructional and assessment methods] because we were definitely tapping into things that we could get more discussion from and I think more time needs to be spent with a day of reflection in between. And granted you can’t do it so fast but I think there’s really good knowledge within our faculty and we need to reflect a little bit more in between. (Interview 18:23, parenthesis added)*

The need to revisit and deepen the discussion around each competency as we collectively refine our process was captured in the recommendation of how to proceed with the DCAS and SSS after the mapping project was over. Faculty members agreed to select the competency of written communication and use it to develop a process that revisited the competency at regular intervals and develop shared understanding using sample work, possibly performance standards, and ongoing dialogue about instructional and assessment methods related to written communication (CMRP Report to SPSC Faculty #3, Appendix J). If faculty members iterate their new curriculum development knowledge from this project into their curriculum development discussions and process, then this project will have had a significant impact on faculty member agency.

**Impacts on faculty agency – beliefs and strong assessments.**

Reviewing the mapping process notes and interviews revealed that the process can become a site of debate where beliefs and values are challenged publicly. This public process may be reinforcing of some beliefs about knowledge and learning and challenging of others. The most identifiable instance of the impact of contention during the process and subsequent reflection was the introduction of the new SSS item termed “qualitative inquiry” (CMRP Report to Sport Science Faculty #2, Appendix G). During
our discussion of the SSS signature on day two a faculty member made a case for the fact that the DCAS was quantitatively and analytically biased and did not value qualitative inquiry in the same light as it did quantitative research. After some debate and a preliminary definition of qualitative inquiry was proposed a vote was held that led to agreement to include the new item in the SSS and map it. The group acknowledged at the time that the new SSS item did not have three clearly defined levels as was the case with the other DCAS and SSS items. For the Currickit survey, faculty members were simply asked to ‘ball-park’ their level of sophistication (level 1-3) on the topic if they felt their instructional or assessments methods contained qualitative inquiry elements.

A pre-and post-interviews analysis of attention to qualitative inquiry shows a dramatic impact on faculty member’s attention to the issues as a result of its introduction into the competency discussions. In the preliminary interviews, the subject of developing qualitative inquiry was raised by only one interviewee. After the debate, acceptance by the group, and the mapping exercise, qualitative inquiry was raised by seven faculty members during their second interviews. The following captures the potential influence the process can have on beliefs. The interviewee in this case is not the person who introduced the topic into the discussion:

*Interviewer: Because you were looking at the Meta curriculum or the external signatures and stuff at the same time you were looking at your course, has there been any cross influence in that regard?

*Interviewee: It does make me think a lot more about the concepts that I want to make sure they are integrated in - you know like the Information Literacy and ... part of that course is really of sort of Qualitative research ... students don’t get hardly any of that other than maybe studies they’ll stumble across. (Interview 21:21, parenthesis added)*
Another indicator of beliefs surrounding evaluations of curriculum initiatives was faculty member responses regarding which domain of assessment (Schweir et. al., 2007) is a priority for them while considering curriculum change. Faculty members were provided with a four component Venn diagram during interview one, similar to the one in Figure 23. They were then asked to discuss which of these areas they felt strongly affiliated to when making curriculum changes in the past.

Figure 23. Domains of Value Assessment (Adapted from Schweir et. al., 2007)

Many faculty members suggested that a convergence of all of the factors motivate them, however, when pressed into a situation of tension, priorities emerged. For example, institutional objectives were typically not a priority for faculty members.

*So institutionally I do feel like I’m not connected to that. ... when you’re busy you cut things that you don’t value right away.* (Interview 9:294)

*I’d say the institution wasn’t part of the discussions at all. I mean that mandate.* (Interview 10:149)

*In terms of institution, I don’t know if I consider - I don’t think that I consider much of Douglas’ goals. I think that I look more in terms of what I would expect our students*
graduating from Sport Science to be or to know once they leave this institution so it was not so much Douglas but more Sport Science. (Interview 11:277)

When pressed for descriptions of what their priorities were when tension existed between goals relating to curriculum options, considerations of disciplinary knowledge, and societal/professional obligations often emerged as dominant in the discussion.

I would say that my motivations primarily sit within discipline and society because I am a strong advocate that the students need to have a strong discipline knowledge. Discipline based. I believe that that’s important that there are some concrete ideas that will form a foundation from which they can springboard. But if they don’t have a strength of foundation in that discipline then I see that as a social justice issue that’s - that may not be preparing them well to engage in that discipline. (Interview 7:137)

Discipline would be very, very important. I want our graduates having gone through my advanced course to be at the same level with a comparable course elsewhere. There’s a bit of pressure on that in that you want to ensure that your graduates are people who finish my class match up with people outside that did similar courses elsewhere. (Interview 5:155)

My motivation I would say would be ninety percent discipline. (Interview 6:315)

So I think that one of the main focus of it is the fact that I want the students to leave with the knowledge that they need to get out of this course and I need to - if you’re going back to the discipline there’s a number of theories that needs to be covered and students don’t like to cover theories but it needs to be done. (Interview 11:277)

The need to cover a certain number of theories and discipline based content was largely grounded in the legitimization of teaching efforts by virtue of student competence outside the organization. That is not to say that all the beliefs expressed relate to the normative knowledge and practical standards of the fields of physical education and coaching and their related disciplines. Embedded in some faculty member’s responses were beliefs that competence does not mean reproduction of existing knowledge, but more importantly the development of critical social agents that thoughtfully and proactively engage with the world.

I guess I think some of what we need to happen is an agreement on a sort of citizen that we see the program, constructing or creating. (Interview 7:24)
So I just want to be clear on that. I’m talking about a vision that I have that teachers see themselves as social agents. As being able to impact. I’m realistic. I say yes impact structure. But I do believe that. I do believe that we have to stop thinking individually sometimes and work collectively to impact structural change. That’s what I like to see. Critical creative practitioners - I really don’t like that word practitioner but it’s OK in a broad sense… (Interview 7:229)

For these individuals, getting a job and being competent was not enough. The assessment of curriculum and motivation to improve one’s teaching was derived from deep values relating to specific notation of how “critical and creative practitioners” have a role in shaping the world in which we all live.

Do we want a certain kind of student coming out of here? Maybe I do. I think I have a keen sense that they can have an impact in an area that is sadly lacking in our society. (Interview 9:290)

Typical curriculum development processes would not have a pre-interview focusing on beliefs and values that may relate to the assessment of curriculum initiatives, however, these beliefs and values are carried throughout a curriculum development process. Some beliefs are very strong at the outset, such as the need to develop socially critical practitioners, while other beliefs, such as those strongly associated with practical competence, may be more adaptable to new ideas due to the use of instrumental considerations of criteria for value assessment. From a results perspective, there is little doubt that mapping based on a public sphere conception of curriculum development showed that the introduction of beliefs and values into the public sphere can impact the individual members and lead to distribution of the new curriculum-related beliefs amongst its members. As a basis for future curriculum actions (agency), the ability to contribute to the determination of what should be valued by group members completes the triad of pre-requisites identified by Alexander (2005) for meaningful curriculum-related agency. Agency requires background knowledge of a
topic, beliefs expressed as values that can contribute to strong assessment, and freedom to act. Mapping showed potential to bolster these pre-requisites for all, and furthermore, be a site of direct curriculum agency for others, as it was for the individual who introduced qualitative inquiry into the curriculum discussions.

As a space for bringing personal beliefs and values to the foreground, mapping and particularly the decision to include or exclude specific competencies becomes a potentially volatile public space of engagement. For example, the debate regarding the inclusion of ‘qualitative inquiry’ into the Sport Science Signature was not simply one of practical concern for future student success, it was a value-driven discussion relating to how the world is perceived and what counts as knowledge depending on your disciplinary background. Mapping when fully implemented forces prioritizing choices onto the group. There is simply not enough time or space in a curriculum for all ideas, therefore, mapping forcing us to chose some priorities over others. Without rich discussion about those choices the values that guide them remain a hidden curriculum to those involved.

Emergent Grounded Patterns – Metaphorically Speaking!

Neither the faculty member goals identified in the pre-project interviews, nor the research purposes of this project set out to investigate metaphorical thinking and the relationship of curriculum development and maps to the concepts of locale, place, journeys and villages. However, as the coding of interviews progressed and interviews were revisited a second and third time, the concepts of maps being representations of a field of meaning centred around the BPEC program emerged. To capture insights as they occurred during coding, examples that supported the idea of curriculum maps as
metaphorically related to topographical maps and community were coded with term “map-metaphor-sub-tag.” As Table 9 illustrates, there was a significant number of these comments that could be organized into themes. The themes relate to the inhabitants of curriculum spaces, the construction and validity of curriculum maps, and the uses of maps by both locals and outsiders to the curriculum landscape. In what may sound like a cliché given the metaphoric connections being discussed, the most ‘grounded’ and ‘dense’ ideas that emerged in relation to maps as metaphoric constructions related to “students as inhabitants.” Any time a reference was made during interviews that placed the student at the core of this curriculum space, it was tagged with “students as inhabitants”. For example, when discussing domains of agency this faculty member brought students to the fore-ground of the discussion in the following quote.

“I think that before looking back at this I think that my motivation is to not let students down. So regardless of what they want to do, whether they’re going to graduate from here and then go and become teachers that they never feel that they didn’t get the education or knowledge or beliefs or values that they were supposed to get from our program” (Interview 11:301).
Table 9. Map as Metaphor - List of Codes and Related Groundedness

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<thead>
<tr>
<th>Code</th>
<th>Groundedness “# of related quotes”</th>
<th>Total</th>
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<tbody>
<tr>
<td>Students as benefactors of maps &amp; primary inhabitants of curriculum space</td>
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<td></td>
</tr>
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<td>- Map metaphor - student as primary inhabitants</td>
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<td>80</td>
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<td>- Map metaphor – directions, pathways, and gates</td>
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<td>- Map metaphor - landmarks - touchstones or rules</td>
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<td></td>
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<tr>
<td>- Map metaphor - instructor as guide for students</td>
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<td></td>
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<tr>
<td>- Map Metaphor - dead ends and curriculum ghettos</td>
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<tr>
<td>Uses of maps by faculty</td>
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<td>- Map metaphor - understanding complexity</td>
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<td>94</td>
</tr>
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<td>- Map metaphor - maps as external referents with authority</td>
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<td>- Map metaphor - tool for understanding</td>
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<td>- Map metaphor - situating oneself</td>
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<td>- RQ1 --- external communication tool</td>
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<td>Validity of maps</td>
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<td>- Map Metaphor - trustworthiness of information</td>
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<td>- Map metaphor – diversity of faculty</td>
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Maps as a tool for understanding a curriculum-related field of meaning, such as the one centred on the BPEC program appear to be a logical choice of tool for curriculum developers to pursue. Educational programs, such as the BPEC are carried out in both physical and intellectual spaces and maps are an analogically consistent
way of understanding both. The deep connections among the concepts of place, travel, learning and curriculum that permeate the language of faculty members, as represented by the codes in Table 9, represent sites of rich inquiry and discussion for those involved in curriculum theorizing and development. The discussion in the following chapter explores these connections in more detail.

To conclude the results section, it is safe to say that both the success and failure of the maps produced in this inquiry can be understood using analogic thinking about topographical mapping. Both the physical world and curriculum maps must be built on a trusted and stable base layer of information. The stable base for the maps in this project consisted of the entrance requirements of the program, course sequences, and graduating requirements (see Figure 20 & Figure 21). The subsequent layers of data added to the map after this layer required shared understanding in order to imbue the map with the authority of agreement. In spite of the trusted base layer that was fully understood by all faculty members by the end of the project, this project failed to create a multi-layered map due to the ‘murkiness’ of a few of the definitions of SSS items and a few faculty members’ interpretations of instructional and assessment methods. The three Sport Science Signature items that remained murky at the time of conducting the Currickit survey were holistic awareness, physical literacy, and qualitative inquiry.

Well ... seemed to me that murkiness came about in trying to figure out what’s meant by some of the terms. In terms of some of the signature items. What’s meant by those terms? How do we interpret those? - And it just kind of gets slippery in terms of well I think it’s this. I think it’s this. You know? - And then when we did try and do some mapping it was well what does that term really mean? And so I think then as soon as you’re on a slippery slope everything just starts (laughing) moving around. And so it seemed like the ground was moving from underneath us at times. (Interview 19:23)
Slippery slopes and shifting ground, as it turns out, are no place to build lasting shared knowledge frameworks. However, this study also showed that slippery slopes and shifting ground may be hardened by the rich curriculum debate that occurs as a result of public sphere thinking employed during a mapping exercise. The role of public sphere thinking and the philosophic implications of the metaphoric connections surrounding curriculum mapping are now pursued in more detail in Chapter 5 ‘Chapter 6: From Maps to Villages: Metaphors, Public Sphere Thought’. 
Chapter 6: From Maps to Villages: Metaphors, Public Sphere

Thought and Agency

Through Kliebard’s (1975) metaphor of travel, the educational experience is seen as a journey of discovery for the learner. Both the nature of the road and the nature of the learner are considered in determining the course of the experience. As guide and companion, the educator is concerned less with a need to "anticipate the exact nature of the effect on the traveller" and more with providing a journey "as rich, as fascinating, and as memorable as possible (p. 85). (Baptist, 2002, p 19).

This discussion chapter addresses insights that emerged as a result of this curriculum mapping project relating to the theoretical constructs around which this study was originally framed; namely Habermas’ (1962, 1989) theory of public spheres and communicative action, faculty member agency (Alexander, 2005; Schwier, Kenny & Campbell, 2007) and the role of analogic acts and metaphoric process (Gerhart & Russell, 2004) in constructing and challenging ‘fields of meaning’. The complexity of curriculum development processes, such as mapping, is in part due to the volume of information involved and in part due to the distance of that information from actual student experiences. The greater the distance, the greater the assumptions involved and the greater the risk of detaching the curriculum process from the lived reality of faculty members and students. The complexity of mapping is compounded by the fact that curriculum development relies on a group of autonomous individuals nested in a work-based community, and therefore, curriculum development processes and the theories employed to understand them are bound to workplace ecology. Within all the
curriculum and social complexity resides a shared goal held out by the group of offering a coherent and meaningful education experience culminating in the awarding of a credential, in this case, the Bachelor of Physical Education and Coaching (BPEC) degree.

A theoretical assumption adopted in this project is that a workplace based community constituted by an academic department has the shared interest of degree curriculum around which public sphere characteristics are identifiable. Within this nested variant of the grand public sphere, curriculum changes as a form of faculty member agency come to represent the ultimate result of communicative action by members of the community. Underpinning this understanding of a department and curriculum development is the combination of public sphere thinking, a grounded mapping metaphor for understanding curriculum development, and considerations of faculty agency. These three theoretical lenses brought together gives rise to the image of an inhabited curriculum space complete with physical and social conditions that shape the discourse of its community members. The members of the Sport Science department in this study not only inhabit the shared physical spaces of their program, but also inhabit a conceptual landscape of ideas, intentions, and actions that when articulated in familiar curriculum forms constitute the boundaries, learning pathways, challenges and rewards of their program.

In the same way that topographical mapping is a process for developing shared understanding of natural, human-made, and socio-cultural aspects of physical place, curriculum mapping can be viewed as an analogic process undertaken by those interested in curriculum development and its socio-cultural surround. From this
perspective, a number of insights about curriculum mapping and departmental functioning as a nested variant of the public sphere emerge and are presented below as a sequence of propositions. The six propositions that frame the remainder of this chapter are inter-related and in sum form an analogic extension of the metaphors that give rise to term ‘mapping’ to describe curriculum representation and outline some impacts of public sphere thinking on curriculum development process and faculty agency. Proposition one suggests that *curriculum mapping is a conceptual tool deeply rooted in the language of place and travel that permeates educational thinking.* Proposition two looks at the application of Habermassian (1962, 1989) public sphere theory to curriculum development processes suggesting that *a department’s curriculum development processes are understandable though a lens derived from public sphere thinking.* Proposition three prepares the theoretical ground for propositions four and five by outlining how *public sphere thinking and a metaphorically grounded notion of curriculum mapping are conceptually compatible.* Proposition four adds detail to understanding why public sphere thinking matters by arguing that *public spheres are mobilized by vision, problems, or both.* Proposition five brings an analogic extension (Gerhart & Russell, 2004) to the field of meaning surrounding curriculum development by suggesting that *public sphere thinking combined with a grand learning metaphor connected to place and travel give rise to a curriculum village.* This chapter closes with proposition six, which links faculty members and students as inhabitants of the curriculum village and suggests that *organization of curriculum development using public sphere thinking positively influences curriculum-related agency.*
Each proposition begins with a description of its features, followed by discussion and examples from the study. The cumulative implications of the propositions underpins the curriculum development recommendations presented in Chapter 7 directed at maximizing faculty member agency through the application of public sphere thought to the facilitation of curriculum representation projects, such as mapping.

**Proposition 1: Curriculum Mapping is a Conceptual Tool Deeply Rooted in the Language of Place and Travel that Permeates Educational Thinking**

Why are collections of a learner’s work and accomplishments called ‘port’-folios? Why did the Ministry of Education in British Columbia use the term ‘passport’ to education for its post-secondary scholarship program in the late 1980s? Why is an undergraduate foundation year followed by a set of degree options called a ‘pathways’ model? Why do we call the organization of curriculum information in visual form a ‘map’? These are of course leading and easily answered questions in light of proposition one: *curriculum mapping is a conceptual tool deeply rooted in the language of place and travel that permeates educational thinking.* The relationship of travel, place, and learning dates to a time when the world was explored and learning was primarily conducted through inter-generational transfer (mentoring and direct teaching). As modernity took hold, learning, and more particularly, knowledge were untethered from exploration of the material/physical world, and yet, the linguistic relationship of travel, place, and learning persists in educational thought. In this regard, the use of mapping to understand an educational landscape, and the journey of students within, is consistent with a larger learning metaphor that sees students on a journey of both self and worldly discovery.
And within sport education you know one of the big assessment tools they recommend using is the portfolio and so I’ve never used a portfolio before and so it was a neat opportunity to really try it out, learn through the process, but incorporate the students as well. They actually helped design and sort of include different elements, artifacts from the course to be a part of that portfolio. (Interview 14:55)

As the above quote from a faculty member in this study demonstrates, the purpose of highlighting the relationship between travel and education is to suggest that the travel metaphors and language used throughout education are not simply linguistic afterthoughts of convenience. The connection between travel and learning pre-dates any modern or post-modern curriculum theoretical ruminations. In the age of curriculum re-conceptualization, Kliebard (1975) and others began drawing explicit attention to the use of metaphor to understand curriculum planning and implementation. Examples range from the organic growth-oriented view of a garden (Baptist, 2002) to the sterilized modern view of inputs and outputs so aptly described by Freire (1970) in Pedagogy of the Oppressed as the banking mode of education. Of specific relevance to curriculum projects are the underlying analogic connections made within the metaphor to theories of learning and knowledge. In the banking metaphor, knowledge is external, reproducible, and students learn through predictable and reproducible closed systems. In organic metaphors, knowledge is internally constructed, personal growth is the dominant centre of discussion, and students are part of open learning eco-systems.

The richness of a travel and place based metaphor of learning as it relates to mapping goes far beyond colloquialisms. Beyond the physical connections between travel and learning are the cognitive frameworks transferred from our material pursuits to our cognitive ones. We no longer simply map physical landscapes. Mapping as conceptual tool has evolved to the point whereby humans map ‘fields of knowledge and
inquiry’ across all disciplines and professions. Curriculum maps in this light help to structure the knowledge and experiences that are part of the field of meaning related to an educational locale. In this case, the locale was the Bachelor of Physical Education and Coaching program at Douglas College.

There’s the notion of map. Of not necessarily being traditional static is one place to another - but instead I see it more of that - as that lived space. ... But there’s been a lot of post structuralist writing about maps and so trying to move away from point A to point B but all of the options and the variabilities within that. So map is a funny word isn’t it? (Interview 19:81)

Curriculum mapping was seen in an optimistic light in this study. This optimism arguably stems from the power of mapping to organize both physical world and cognitive fields of meaning throughout our lives. Past positive experiences with maps contribute to an analogically derived hope that curriculum information is organizable using curriculum maps with the same efficacy that physical and social word information is organizable using geographic maps layered with social data. However, optimism was not the only emotion associated analogically with mapping, faculty member optimism was tempered by the complexity and enormity of the task:

It’s so large because you have the experience, you have the outcomes you want but then you want the assessment piece as well because I think the power of video needs to be done in fourth year so that they’re putting it all together and that they’re seeing... yeah, good luck with that (laughing) which map you’re going to choose, because they’re so huge and they’re all so valid. (Interview 1:24)

That seems like a major job to me to have a cross curriculum software and click on a course and see this is what to do. It’s mind boggling, but I’m looking forward to it. (Interview 4:21)

I just think the whole notion of mapping is a very huge undertaking and could really give us a lot of information. A ton of information. It’s just a question of how best do we want to use that information? And in what way to we want to concretely use that information to better or degree? In the way that we teach it now. And possibly redirect it or refocus our degree on things that we haven’t even thought about? So I think it’s - it will provide a lot of food for thought. I think that’s what’s so great about it. (Interview 14:37)
Without the mapping I think this becomes very difficult to go through. Not impossible but very difficult Interview 22:15

Mapping as an analogic component of a ‘super-metaphor’ (Benade, 2008) relating learning to travel and place does not make it a de-politicized or neutral process. The connection simply opens the door for deeper thinking about how the politics, professionalism, and informatics of the mapping process impact community social dimensions (program goals, boundaries, rituals …), the fields of meaning related to the curriculum (cognitive dimensions), faculty members agency, and ultimately student learning. Benade (2008), in a critical review of mapping as a tool promoted by experts to localize the adoption of state-wide curriculum in New Zealand adopted in 2007, suggests that the power of interpretation and influence resides with the “cartographers” of the curriculum:

Cartographers use available empirical evidence, such as satellite imagery, and in earlier times, on-the-spot visual experience to note in symbolic form what is there ‘in the world’. In this sense, cartographers practice a very pure empiricism, relying on sensory experience to detail a world apart from the cartographer. Needless to say, this empirical evidence is still filtered through the experience of the cartographer and the cartographer may make decisions about what to include and what to exclude that actually have a bearing on the final product. The map is at best a symbolic representation of reality – it is not reality itself. (p. 96)

The results of this study suggest exactly what Benade suggests above in relation to the power residing with the cartographers. The participatory action research approach chosen was an attempt to co-create or co-construct maps so that all those involved in delivering the curriculum were also cartographers of the maps meant to represent the experience. Furthermore, this study also supported Benade’s assertion that “the map is at best a symbolic representation of reality – it is not reality itself (p. 96):” The results of this study also support the potential for disconnection between a
map and experience as shown by the limited utility derived by faculty members of the map due to its failure to come to a consensus on reality (shared understanding).

Returning to Benade’s (2008) use of the term ‘super-metaphor’ to describe the types of metaphors used in education to describe mapping, what is ironic about his introduction of the term and his critique of mapping is that although he refers to policy makers as cartographers and makes other analogic connections among learning travel and place in his writing, he does not draw the explicit connection that sees curriculum maps evolving out of the deep underlying connection among learning, travel and place. Instead, he uses the term to set-up an argumentative straw man by describing metaphors that do not work with curriculum mapping, but have been widely used in the literature related to teacher adoption of the practice in relation to external requirements. For example, maps as part of a ‘complete tool-belt’, maps as part of a ‘building metaphor’, and maps being like a ‘well rounded menu’. Rightly so, Benade criticizes these as insufficient and potentially misleading when the assumptions about learners and learning embedded in the metaphor are brought to the foreground:

Tension runs along a fault line between learning as a serendipitous activity or as one that can be planned predictably with set outcomes. As Rolling (2006, p. 41) has suggested, “... learning is no sure thing and it is not easy to map...” Clearly then, this claim rests for its success on all teachers in a school collaborating mutually on a plan and a process for which there is consensus, underpinned by a philosophical acceptance of learning as a predictable activity leading to predictable outcomes. (p. 98)

In response to Benade's (2008) and Rolling's (2006), comment that ‘learning is no sure thing and unpredictable’ this study found a mixture of beliefs about learning guiding faculty members’ interest in mapping. Those who would like to believe that learning was continuous, predictable, and prescriptive were hopeful about mapping,
while there were also a number of faculty members who recognized maps as guides pointing out landmarks and waypoints for a learning journey.

*When I talk about journeys from a teaching perspective I don’t necessarily know how I’m going to get somewhere, right! But I like to know where I’m going.* (Interview 15:261)

*Well one of the ... main concerns about planning a journey to stringently. Take a look at curriculum for example. Preplanned curriculum is very static. Right? ... I like to take curriculum and not make it static. I want to make it a little more dynamic within - the learner’s perspective. Right? In order to do that you have to - actually kind of loosen up the - primers. The journey. Right? And allow the students to sort of create their own experiences and build on their own experiences.* (Interview 15:293)

The range of beliefs about learning and knowledge that can be attached to a mapping process demonstrated that the conception of the process and detail desired in the maps require foregrounding to understand whether a mapping process will create tension for faculty members or be aligned with their beliefs. For faculty members seeking high levels of fidelity in their curriculum documents, maps may resemble an itinerary with high levels of detail, prescribed and/or standardized assessment and performance standards associated with each locale before being permitted to progress on one’s journey. For faculty members more familiar with enacting their curriculum with students, maps may be nothing more than a few x’s on parchment and the explorer’s hope of finding what is intended through a journey of unpredictable discovery.

The existence of the super metaphor takes us part way to understanding curriculum mapping as both an actual and a cognitive practice for ordering faculty members’ lifeworld. In Benade’s (2008) critique of mapping, a process of local mapping was suggested for adopting New Zealand’s national standards. In this study, a set of external standards and internal standards were under review during the mapping process. The conditions of mapping and the local level of autonomy are contributors to
whether agency and local knowledge are valued during the process. This study attempted to foster public sphere conditions within the instructor community by using the participatory action research methodology described by Kemmis and McTaggart (2004) to foster local autonomy and agency. The creation of maps and their use in this regard are the results of the cumulative communicative actions of the group, and not inherited or accepted as fact from outside the community. Maps in this light become constituent to group exploration of the boundaries, pathways, nooks and crannies of the public and private spaces throughout the BPEC curriculum. Local curriculum and pedagogy was acknowledged as the foundation of a participatory process that sees the curriculum landscape as locally controlled. Local control was also conceived in a specific way by utilizing public sphere thinking for understanding curriculum development within a department.

**Proposition 2: Public Sphere Thinking Provides Insight into the Qualities of a Curriculum Development Process such as Mapping.**

Proposition two suggests that “public sphere thinking” is a generative lens for analyzing curriculum development processes, discourse among faculty members and the surrounding environment of a department in relation to the pre-requisite conditions of a healthy public sphere as defined by Habermas (1962, 1989) and later refined by authors such as Calhoun, (1992), Fraser (1990), and Benhabib, (1992). Public spheres, as idealized by Jurgen Habermas (1962, 1989), in *The Structural Transformation of the Public Sphere*, exist in relation to our political and economic means for organizing our lifeworlds. The public sphere “designates a theater in modern societies in which political participation is enacted through the medium of talk” (Fraser, 1990, p. 57). And yet, in
contrast to our economic and political means of social organization, public spheres are the spaces in society represented by a debate of ideas “constituted around rational critical arguments, in which the merits of arguments and not the identities of arguers [are] crucial” (Calhoun, 1992, p. 2). Importantly, to Habermas and other modernist public sphere scholars such as Taylor (2004), public spheres are not simply theoretical constructs; they are physically constituted during communicative acts (i.e. talk and the creation of communicative artefacts such as documents, art, software etc.). The application of public sphere thinking to an academic department, is an evolution of Habermasian public sphere thinking embraced by Kemmis and McTaggart (2004) in their justification for adopting participatory action research methodology in workplace based research. Fraser (1990), in her critique of Habermas’ bourgeois public sphere analysis challenges the ‘grand public’ idea by suggesting that there are many nested and overlapping sub-publics distributed throughout society including workplace settings. The key criterion allowing for the application of public sphere thinking to this project is that the department involved in the research can be considered “self-managing” with regard to its curriculum decisions. As a self-managing group its decision making can be idealized into a public sphere if “all those engaged in a collective undertaking would participate in deliberations to determine its design and operation” (Fraser, 1990, p. 76).

In their description of participatory action research, Kemmis and McTaggart (2005) outline the features of a public sphere as they relate to the practices of participatory action research. These features were introduced in Table 6 in Chapter 4 and are now revisited in the discussion below while giving consideration to the results of this exploratory project undertaken using a participatory action research methodology.
Public spheres are constituted by actual networks of participants.

The immediate public involved in this project were the 13 faculty members involved in delivering courses in the Bachelor of Physical Education and Coaching (BPEC) degree. As a nested public with permeable boundaries, the influence of other institutions such as the research universities to which BPEC students transfer and the National Coaching Certification Program (NCCP) were present in the form of documents or by-way-of faculty members having multiple affiliations with these publics.

Actual publics need actual means of communication and organization. The full methodology and timelines of this project can be reviewed in Chapter 4, but in summary, the primary means of communication took the form of email, face-to-face communication, and the creation of artefacts in the form of the data and maps produced and discussed in the results. The primary communicative acts that were validated by group members in the form of action were captured in the Curriculum Mapping Research Project (CMRP) reports to faculty members 1, 2, and 3. These documents represented summations of community discourse and were verified by community members during document review discussions.

Public spheres are self-constituted (i.e. formed voluntarily without coercion).

In this study, the interpersonal connection between researcher and faculty members and the workplace based setting make this a difficult criterion to assess. In order to ensure that participation in the research was voluntary, a two-stage informed consent process was undertaken whereby the department members first decided as a group (without the researcher present) whether the work of the project (mapping) was
work that the department wanted to see happen. Once the group decided it was desirable, the second phase involved individual informed consent to being interviewed for the research component of the project. Individuals were given the opportunity to leave the research phase at any point and the work contributed to this project was not related to any performance or quality review effecting faculty member’s official position or rank. In Douglas College all faculty members who are post-probationary hold the same faculty rank creating a relatively flat hierarchy amongst group members in terms of authority. This workplace condition is perceived to be an asset to the creation of public sphere conditions.

Although the workplace characteristics and voluntary nature of joining the project eliminated the possibility of explicit coercion, the interpersonal connections between myself as facilitator/research/department member and the other faculty members was raised as an important consideration during the first round of interviews. The potential for the research agenda to drive the process as opposed to the mapping process driving the agenda was coined the “Brian factor” in ‘CMRP Report to Faculty #1’ (see Appendix D). The ‘Brian factor’ was addressed openly in the very first discussion on day one of the intensive period and revisited each time a consensus was forming around possible actions in order to bracket my research interests from the department curriculum interests. My two main points consistently revisited during bracketing moments were 1) that my research does not rely on whether we decide to pursue mapping as a department after this exploratory project, and 2) I do not have a stake in the forms of mapping chosen being successful. I reinforced that my interest lies in the qualities of mapping that we explore and in gaining insight into its utility for
curriculum development within the department. This interpretation of bracketing, whereby I take communicative action to bring my administrative power to the foreground was meant to open a communicative space in which my power can also be problematized by individuals or the group. “The relationship between publicity and status is more complex than Habermas intimates, that declaring a deliberative arena to be a space where extant status distinctions are bracketed and neutralized is not sufficient to make it so” (Fraser, 1990, p. 60). The communicative acts made by both me and members of the project in response to concerns of my administrative power support Fraser’s contention that ongoing action is needed to address imbalances of power in public sphere discourse. In this study, there were many moments throughout the process when the leadership of discussion moved between individuals. Furthermore, the group decision at the end of the project to only cautiously pursue the forms of mapping undertaken in the exploratory phase was taken as evidence that the bracketing was successful (i.e. my suggestions could be rejected comfortably), and yet, some utility was ultimately derived from the process by faculty members.

**Public spheres often come into existence (or emerge) in response to legitimization deficits perceived by group members.**

Curriculum and legitimization needs are inseparable. Curriculum, as an expression of intentions about knowledge, learning and being in a possible future for students, has an implicit connection between the student, the instructor, and the norms of the group (knowledge, beliefs, values) that the curriculum is trying to represent. Group is a vague word that may refer to a discipline, a profession, a society in general or even a department. Whenever one speaks of a program mandate, such as the
BPEC’s mandate to graduate potential physical educators, coaches, and students ready for graduate studies, the legitimization anchor points of the curriculum are brought to light for comparative purposes. The stage of curriculum development identified by Wolf (2007), wherein the characteristics of the ideal graduate of a program are articulated represents a moment in time in which a local representation of legitimizing concerns manifests itself in the form of goals. How much of this ‘ideal graduate’ is a normative construction representing reproduction of existing thought and practice? And, how much of this individual represents a ‘creative critical thinker’? are questions that can bring light to the local public’s connections to the broader norms of publics that surround the program (other institutions, departments, professions, disciplines, society-at-large, etc.).

In this study, some faculty members held a notion of curriculum legitimization similar to Abs (2004) finding that teachers want curriculum that is legitimized against normative standards, while other faculty members saw the ideal graduate as someone who can challenge and help reshape those norms.

Political reality also shapes legitimization concerns for faculty members in this study. There is a curriculum hierarchy in the British Columbia (BC) academic system that must be acknowledged. Douglas College is a ‘sending institution’ to other BC universities designated ‘receiving institutions’. Sending institutions have to have their curriculum guidelines and outlines approved by receiving institutions to be granted transfer credit in the BC Transfer Guide, which manages the province-wide system of transfer. The results showed that faculty members teaching in courses that transfer to other institutions demonstrate a need to have their students perceived as performing as equals to those students who start at the receiving institutions. The bar is set in large
part by the receiving institution and the proxy measure for meeting that bar is student success. Simultaneously, faculty members held-out the need for students to be perceived as creative, critical, and competent practitioners in the physical education and coaching fields. In this second set of legitimization needs, student performance is again the proxy by which curriculum is measured, albeit this time against both disciplinary conceptions of ‘critical and creative’ thinkers and professional conceptions of ‘competent’ practitioners.

A clear single point of legitimization deficit was not presented as a rationale for the project at the outset of the study. According to Kemmis and McTaggart’s (2005) conception of participatory action research this may have presented a risk to engagement due to the lack of a singular shared legitimization concern. However, what can be concluded in response is that the need for curriculum legitimization is ubiquitous amongst faculty members, however, the reference points for curriculum legitimization vary from faculty member to faculty member. For some faculty members, legitimization by University peers matters most, while for others, the need for curriculum legitimization against locally agreed upon characteristics of an ‘ideal graduate’ matters most. Regardless of individual reference points, the distributed need for legitimization of curriculum appears to be a key motivator for faculty members to engage in a curriculum development process that carries the promise of transparency and discourse leading to the potential for curriculum comparison.
Public spheres are constituted for communicative action and public discourse, pre-suppose communicative freedom, and thus intersubjective agreement, mutual understanding and unforced consensus represent the communicative intentions of the group.

The primary communicative actions of the Sport Science department involved in this project were curriculum discussions and the creation of a variety of curriculum documents and reports that represented group intentions captured throughout the development process. In order for the communicative actions to represent group thought and agreement it is pre-supposed that communicative freedom was present during discussions and that the group was striving towards mutual understanding and consensus. In the following discussion, the presence of communicative freedom is considered independently from the public sphere goals of reaching mutual understanding and consensus.

Communicative freedom in its ideal form allows community members to “occupy (or not occupy) the particular discursive roles of speaker, listener, and observer, and they are free to withdraw from the communicative space of the discussion” (Kemmis and McTaggart, 2005, p. 588). Communicative freedom goes beyond voluntary entry into a project and suggests that there are times when one will want to speak and times when one wants to listen. If the community is functioning as a healthy public sphere, individuals will be able to leave status and ego at the door and engage with each other's ideas openly. The conditions that give rise to communicative freedom relate to individual member's abilities 1) to access relevant information, 2) to actively bracket their positions of authority and engage around ideas as equals, 3) to problematize emergent issues previously not considered by the group, and 4) to display the habits of mind consistent
with definitions of a rational critical thinker, (i.e. withholding judgement, intellectual rigor, respect for reason, etc) (Bailin et. al., 1999).

In this project, access to information played a key role in communicative freedom. Generally speaking, as expertise and understanding were gradually dispersed amongst faculty members over the four days of discussion, more faculty members shifted from listening to speaking and a few embraced leadership roles when it came to decision making about the future of the project in the department. At the beginning of the process when historical program and curriculum issues were at the forefront of discussions, faculty members with more than four years experience, who were present during degree construction, occupied speaker roles more often than newer faculty members. As discussions progressed to instructional and assessment methods used throughout the BPEC program, roles shifted and all faculty members took turns sharing speaking and listening roles. During instructional and assessment method discussions members with specific curriculum or pedagogical expertise often provided background or additional depth to discussions.

The ability to let those with knowledge and experience on a topic ‘take the floor’ and contribute to a discussion requires bracketing and self-awareness by those who hold power or speak disproportionately in a group. Bracketing of power is Habermas’ idealized human state where ego and status are ‘checked at the door’ and individuals leave their personal issues behind them in an effort to understand the world through rational critical debate. The notion that rational critical debate will win the day because humans have “drive” or “desire” to understand their world in an ordered way is a romanticized ideal based on an essentialist teleological argument. Our desire to enter
into rich discourse may just as easily be driven by a need for personal validation or a need for group affiliation. Regardless of the justification for bracketing power and entering into rational critical debate, the primary argument made by Habermas is still valid and important for achieving public sphere conditions. Within a public sphere, attempts to use power instead of ideas during discourse undermines communicative freedom of group members which ultimately undermines the possibility of reaching mutual understanding and consensus due to the related effect that power has of compromising individual member’s opportunity for internal assessment of new ideas.

During the second interviews with faculty members, it became clear that more small group discussions (3 or 4 faculty members per group) before large group discussions would have ensured all faculty members had a chance to voice their opinions more often. This would have mitigated power imbalances during early discussions that were based on background knowledge levels. Knowledge is power in a communicative setting and during early stages of the public sphere formation, a lack of knowledge for some emerged as a definable limiter to communicative freedom. Two faculty members reported placing internal restrictions on themselves during the early large group discussions. Their comments took the form of stating that some faculty members have ‘strong opinions’ or ‘speak more’ often. Their suggestions to improve the situation included having more small group then large group discussions so that opportunities to speak were more frequent, and presumably, opportunities to ask questions within a smaller group would accelerate their knowledge acquisition, thereby levelling power imbalances relating to knowledge differences.
We now move from the pre-supposed public sphere conditions of communicative freedom and bracketing of power by individuals to the presence of shared understanding and consensus as goals held out by public sphere participants. According to Habermas (1962, 1989), highly functioning public spheres are constituted such that the social conditions allow status and power as arbiters of truth to be supplanted by a rich debate of ideas that leads to a normative consensus about the truth to emerge from an educated and rational debate. Fraser (1990) supports the fostering of debate within public spheres while expressing concern over Habermas’ assumption that a common good or consensual truth will always emerge from rich discourse:

In general, there is no way to know in advance whether the outcome of a deliberative process will be the discovery of a common good in which conflicts of interest evaporate as merely apparent or, rather the discovery that conflicts of interest are real and the common good is chimerical. (p. 72)

In the general public sphere, Fraser’s concern surrounds us in the form of richly debated minority positions competing for attention in the larger public sphere. There is often little connecting these positions to a common good, but each can be said to represent a ‘local good’. In a sub-public, such as an academic department, where the membership and goals of the group are more closely associated, finding common ground, consensus, or the common good are more likely outcomes of rich debate, however, they are not guarantied outcomes. Fortunately, the real justification for entering into rich debate does not rest on an emergent consensus pointing to a ‘truth’. The real justification for rich debate within public spheres is the avoidance of authoritarian decision-making and plebiscitary legitimization attempts by those holding powers (Specter, 2010). When consensus is not possible, there should at least be a
shared acknowledgement that all those who wished to contribute to the debate where given equal terms and opportunity before communicative action was taken by the group.

The protection and fostering of communicative freedom falls to all public sphere members, but disproportionately lands at the feet of the facilitator. The facilitator in many ways should be the champion of the public sphere goals of achieving rational critical debate leading to the potential for mutual understanding and consensus. A facilitator deploying public sphere thinking is charged with trying to recognize power abuses or moments when public sphere conditions are being undermined by individual interests. By adjusting communicative conditions, or addressing the issue directly in defence of public sphere ideals, the facilitator is defending communicative freedom as a recognizable feature of departmental discourse. Furthermore, the facilitator must attempt to restrain one’s own position and willingly admit to one’s own administrative power during discussions due to his or her central position in the community (for an example, see CMRP Report to faculty members #2, “mea culpa”, Appendix G). In short, the facilitator deploying public sphere thinking cannot simply be a steward of the topic at hand, but more importantly must be the champion of public sphere thinking. This responsibility requires pro-actively seeking to establish the communicative freedom and power balance that nurtures the richest debate around curriculum topics problematized within the community. Chapter 7 is dedicated to findings of this study relating to facilitation.
Public spheres aim to be inclusive not just of identified members, but also of new members and outsiders.

Social integration of new faculty members is an aim of a public sphere approach to curriculum development. Habermas (1962, 1989) views public discourse (communicative action) as a “possible mode of coordinating human life…” (Calhoun, 1992, p. 6). As a mode of organization for the work of an academic department, rational critical discourse between faculty members requires that new members to the public sphere have access to the same information as existing members. The knowledge gaps create a role for tools of information organization and representation such as curriculum maps. In this study social integration was evident throughout and self-reported by faculty members during their second interviews. The newest faculty members to the department demonstrated significant amounts of knowledge acquisition about the BPEC curriculum due to the mapping project. New faculty member social integration also led to an increasing contribution to group discussions as the process progressed.

I actually learned a lot because everything that we talked about I was not really aware of ... So in terms of everything that we discussed it was all new to me. ... there’s still a lot of work to be done but the outcome seems very appealing ... I learned the origins. The decisions that led to the selection of specific courses which again I wasn’t aware of. ... That was an eye opener for me. So now I understand decisions that were made a lot better. So I think that - that’s why it was quite valuable for me. So it’s all information discussions that I had never been part of. So it was nice to really get to know that. (Interview 23:15)

Public spheres create artefacts as part of their communicative acts. Artefacts such as curriculum documents and maps in this case become possible sites of future ‘intersubjective relations established through symbols with other individuals (Habermas, 1998, p.29). Habermas acknowledges that public spheres and communicative acts are not restricted to face-to-face communication. Communicative acts, according to Habermas can occur between an artefact of previous discourse and an individual or
group. For new faculty members who join the department after the initial mapping project, curriculum maps and documents that have been agreed upon as valid are a potential site of future induction to the background knowledge necessary in order to become a contributing public sphere member. From this perspective, the successful completion of the curriculum maps would have been a significantly more potent outcome of this project then what occurred. The completion of fully trusted maps would have been a powerful communicative act by the department creating a stronger reference point for new faculty members and outsiders to join ongoing discourse more efficiently in the future.

I think that master mapping document brings the curriculum to the department because a lot of times, curriculum development is one faculty’s or two faculty’s offices. Right, and that is the danger in post-secondary curriculum. When a faculty leaves, they take with them their passion or perspective and someone else does the course and it creates a very different focus. Right! Mapping would keep the department in check. (Interview 13:202)

The inclusion of new Sport Science department members in rich discourse was achieved by the facilitated mapping process; however, this project did not attempt to include outsiders or open its process to department outsiders during the exploratory phase. Many faculty members carried joint affiliations and interests with them across public sphere boundaries in this project representing the openness of the process to outside ideas, however, this is not the same as inviting external department members or individuals from other institutions to join the debate of ideas surrounding the curriculum. Going ‘truly public’ in this regard is a continuation of this project for the department and would be triggered by the creation of maps imbued with the confidence of shared understanding and faculty members’ agreement that the maps represent a guide to the lived curriculum reality of students and faculty alike.
Public spheres tend to communicate in ordinary languages allowing for mutual understanding.

The language and terms surrounding the BPEC program and curriculum in question as part of this project were limiters to creating mutual understanding. The results showed that a lack of agreement on the meaning of terms relating to instructional methods, assessment methods, and the Sport Science Signature (SSS) led to an undermining of confidence in the maps produced in this exploratory project. The ‘ordinary language’ of the department was not easily identifiable. Furthermore, during discussions, the tendency of the group was to increasingly differentiate concepts as opposed to simplify them. For example, the original definition of a ‘case study’ was deemed too broad to capture the nuances of how cases were used by faculty to assess student learning. The term was eventually divided into 1) case creation and 2) case analysis to accommodate pedagogical variations. A primary finding of this study is that shared understanding of curricular and pedagogical language amongst teaching faculty members should not be assumed.

The suggestion by Kemmis and McTaggart (2005) that participatory action research teams use ‘ordinary language’ pre-supposes that the local public is articulate about its own practices and intentions. As a public sphere is convening, it may go through a phase where using ordinary language contradicts the need for local exploration of detailed language used by teaching and learning community members. To reach mutual understanding, simplification of language at the early stages appears to be less important than taking the time to explore, describe, discuss, and refine existing language used within a community so that each member comes to a shared understanding of its use. Once mutual understanding is achieved within a department,
the articulation of local language and intentions with external interests would benefit from 'ordinary language’ use. This project did not extend beyond trying to reach locally shared understanding of terms and intentions that exist across the BPEC curriculum.

Public spheres generate communicative power; that is, the positions and viewpoints developed through discussion will command the respect of participants not by virtue of obligation but rather by the power of mutual understanding and consensus.

Without forgetting Fraser's (1990) critique that reaching consensus along normative lines is not guaranteed by public sphere discourse, when consensus was achieved, the communicative power of the group was signalled by changes in faculty member attention to specific curriculum concerns and commitment to group goals. During discussions of the Sport Science Signature (SSS), the addition of ‘qualitative inquiry’ was suggested as a response to the perceived quantitative bias of the Douglas College Academic Signature (DCAS). Through discussion first in small groups, then as a large group, support for the idea became unanimous and the competency was added in draft form to the knowledge, skills and values section of the Currickit survey in order to get a preliminary sense of its presence and sophistication throughout the program. As a result of attention given to the issue and the group consensus, seven faculty members mentioned qualitative inquiry during their second interviews when asked about what they learned, future curriculum changes, or what surprised them about the mapping process. During the pre-project interviews, when faculty members were asked about signature items and curriculum issues, qualitative concerns were only discussed during one interview after the term was used by the interviewee.
The second example of the communicative power of the group was expressed as faculty member commitment to pursuing mapping in order to better understand written communication throughout the BPEC program. On day three of the intensive period, consensus built around the idea that written communication was a priority area of inquiry for faculty members as the process moves into a post-research phase (see Appendix J). Simultaneously there was a consensus that the data underlying the first round of survey results, graphs, and maps was helpful, but not fully trustworthy due a lack of mutual understanding achieved around instructional, assessment, and competency terminology. The project brought to light the areas of contention in the curriculum and the depth of discussion needed to achieve mutual understanding. The resulting communicative action by the group was an agreement to use written communication as the priority competency for further exploration, while simultaneously refining the mapping and discursive process in an effort to increase mutual understanding. Both written communication and the actual mapping process undertaken were problematized by the group during discussions (i.e. they were not pre-planned outcomes of the project). Consensus around how to proceed represented the communicative power (externally expressed intentions) of the department (see Appendix J).

Public spheres and participatory action research groups rarely have the power to legislate or compel change, even among their own members.

The department in focus during this study has by organizational standards a relatively ‘flat’ organizational structure. All faculty members involved in this curriculum development project occupy the same title, rank, and pay-scale according to their
Douglas College Faculty Collective Agreement. Curriculum changes may be proposed by any member of the group, however, “it is only by the force of better argument” (Kemmis and McTaggart, 2005, p. 590) that the group members will agree to modify their courses and their practices in meaningful ways. Changes suggested by the group must be enacted by individual agents within the department. Follow-through on curriculum initiatives by faculty members was a discernable concern of faculty members during the pre-project interviews and became a focal point during discussion and post-project interviews (see Appendix D).

One hurdle I would think is just the compliance of faculty and staff. We might sit around in a group and say yes we do this, yes we do this, we do this very well. But when we go into the classroom when these other faculty members aren’t around do we actually do it? (Interview 5:235)

In theory, public sphere conditions are meant to ameliorate the situation described by the above quote by fostering an internal commitment based on internal assessment of the validity and quality of ideas. The curriculum mapping approach using public sphere thinking showed potential for fostering accountability as theorized. In this project, the ultimate expression of follow-through is represented by emergent curriculum-related agency leading to instructional, assessment, or program changes associated with group goals. The process of mapping made group commitments more public, which was seen by a faculty member as a way of staying connected to internal commitments made during the intensive phase of discourse:

What if the mapping process sort of - dies down? Then the potential for accountability dies down too. Right! ... [Mapping] makes it more public. What is taking place and what’s not taking place. So that is how it can make a person more accountable or our program more accountable. (Interview 15:95, parenthesis added)
The maps and their ability to make public the mutual understanding and commitments of the group resembled goal statements and fidelity concerns for some faculty members. For others the meetings and discussion fostered by mapping, and not the maps themselves, were the most valued part of the process. Rich and ongoing discussion was presented as an essential part of their learning process. It was considered necessary to foster changes in understanding and belief associated with agency.

The more we have meetings, workshops the more likely it is that you will follow through and do what you’re supposed to do. I think the more the better. And our meetings that we have - just our department - I love them. (Interview 4:87)

And [mapping] could guide us also within our own professional development and what we might need to approach and look at differently than what we may have thought before we had the dialogue. And I think that’s - awesome. (Interview 14:335, parenthesis added)

I like ongoing dialogue though so it doesn’t fall away. And so that’s the sort of thing that I would need but I see it as a very recursive process (Interview 19:43)

The in-ability of a department to legislate and thereby require curricular and pedagogical changes as a condition of employment gives rise to the need for alternative means of influence between group members. Public sphere thinking relies on the ‘force of better argument’ and feelings of responsibility to shared goals to foster faculty member accountability and follow-through on curriculum commitments. A curriculum mapping process, as part of ongoing curriculum discussions, shows significant potential as an aid in the creation of public sphere conditions and crystallizes communicative acts made by the group.
Public spheres and participatory action research groups are often associated with social movements in wider society.

In its rationale, this study drew on a number of wider shifts in society to justify the proposed means and possible ends of curriculum mapping. A case was made in support of technology-assisted mapping based on the increasing use of technology to provide just-in-time information for problem solving. A case was also made that society is increasingly using technology and notions of mapping to make our social realities more transparent (e.g. Google Earth). Finally, a case was made in Chapter 1 that a ‘competency shift’ in higher education is occurring that is requiring programs such as the BPEC to achieve increasingly applied ends (Bird et. al., 2007). As a nested public with porous boundaries, broad societal trends may be mirrored, reproduced, and/or challenged by a department deploying public sphere thinking. Not all issues are of equal importance at all times, however, as wider societal issues become problematized within the context of the undergraduate curriculum, the opportunity for rational critical debate must be present if public sphere thinking exists as the backdrop for curriculum development. Without the opportunity for rational critical debate, a department risks seeing itself as an island of disciplinary thinking or possibly in a servant role to the professions. In both examples, closed thinking is a risk to public sphere ideals that invite problematization of issues as they arise, or are imposed on a local curriculum space from overlapping or wider publics.

During the curriculum discussion in this study, it was evident that the Sport Science department wanted to respond to wider trends in the form of resistance in one case and in the form of withholding judgement in another. The addition of ‘qualitative inquiry’ as a competency was a response to feelings of marginalization based on an
assessment of the Douglas College Academic Signature (DCAS) favouring specific forms of knowledge over others. The Sport Science Signature (SSS), which pre-dated the DCAS, became a site of curriculum resistance, or at least, a source of curriculum counter-balance to the DCAS. The commitment to investigate written communication as the primary competency of interest in the post-research phase of the project was in part a response to the shift in literacy occurring in wider society due to the proliferation of social media. The definitions of a literate person are shifting rapidly in society, but what is lost and what is gained is open for questioning. Tweeting, texting, and blogging were discussed as pedagogical tools in some cases and presented as interfering with traditional registers of writing in others. As a result, faculty members were undecided as to what the digital shift really means to their curriculum and pedagogy. Faculty members wanted more information and discussion before deciding what parts of the digital shift in wider society to resist, embrace and ignore. The first communicative act, the introduction of a qualitative inquiry competency, was clear resistance to wider trends. The second communicative act, the decision to further investigate written communication, represented a collective withholding of judgement.

One difficulty with suggesting that an academic public has true communicative freedom to resist trends in wider society is that post-secondary institutions and by extension faculty members are in the ‘business of education’. As a result, programs often attempt to be responsive to student demands that represent trends and shifts in the broader public sphere. Some shifts and trends are too large to be ignored. For example, being technologically up-to-date, or even better, being a technology innovator in the kinesiology, physical education, and fitness fields is a legitimization necessity for
a Sport Science department advertising that it prepares future practitioners to work and research in those fields. The necessity of responding to societal and professional expectations creates a limitation to public sphere debate in these areas. In the case of technology, true problematization of the need for new technologies as they appear is limited due to the fact that wider society is increasingly operating as a “technopoly” (Postman, 1993), wherein technology is believed to be teleologically progressive and thus above reproach. New technology must be better because its new! In this example, ‘business interests’ represented by the need to stay technologically current may undermine ‘public sphere interests’ which would critically analyze or problematize technophilic tendencies. Applying this example to the mapping and discourse surrounding the DCAS competency of technological literacy, a departmental mirroring of wider technophilic tendencies in an effort to appear ‘up-to-date’ to students may be a constraint restricting the problematization of concerns around specific technologies that should be questioned. The difficulty of separating public, economic, and political spheres (Habermas, 1989) is that a lack of problematization around topics due to competing influences may lead to an absence of discussion, or, the absence of discussion may simply be representative of the fact that the public involved truly does not have any concerns about an issue. Only through the presentation of the topic into the public sphere can the influence of wider trends on a local public be determined.

Given the potential restrictions on the scope of possible communicative acts by a department due to its competing economic, political, and public sphere interests, perhaps the best measure of a highly functioning academically nested public (a department in this case), is its ability to articulate its position in relation to societal shifts.
Whether choosing to follow, resist, or create a trend, rational critical debate is necessary within a department to justify its choice as a communicative act emerging from curriculum-related discourse.

The opening to proposition two stated: *A department's curriculum development processes are understandable through a lens derived from public sphere thinking.* By reviewing individuals’ ability to access information, bracket their power, and problematize new issues as a result of a curriculum mapping process, conclusions can be drawn regarding whether or not the goals and documents that emerge from the process represent strong communicative acts. In this project attempts were made to facilitate a participatory process of curriculum development that, when viewed through a public sphere lens, held up to the public sphere standards. While a few strong communicative acts were identified in the results and discussed above, there were limitations present in the study design that prevented more from occurring. The lack of time afforded for rich discussion and the condensed nature of discussion limited the development of more shared understanding and consensus. By increasing opportunities for dialogue over a longer period, it is conceivable that the maps produced from this project could have been strong communicative acts and artefacts representing shared understanding and consensus around curriculum topics. Public sphere thinking is a state of mind adopted by faculty members and the facilitator of curriculum development. The public sphere thinking guides us towards the ‘practice’ of trying to achieve rational critical debate about issues that arise for a department. As issues arise, the opportunity to speak, be heard, and learn through ongoing curriculum discourse creates the
“recursive process” (Interview 19:43) necessary for ongoing commitment to the shared curriculum goals of the community.

Proposition 3: Public Sphere Thinking and a Metaphorically Grounded Notion of Curriculum Mapping are Complimentary

Curriculum mapping and public sphere thinking are metaphorically compatible conceptual frameworks for understanding curriculum development processes of faculty members. “The idea of the “public sphere” in Habermas’s sense is a conceptual resource” for understanding the structure of society in relation to the democratic necessities of rational and critical debate (Fraser, 1990, p. 57). Public sphere thinking allows us to understand the conditions that give rise to specific forms of dialogical intercourse. Curriculum mapping has been presented as a process for organizing the intentions and actions embedded throughout an academic program of study to bring meaning to a curriculum landscape inhabited by the students, faculty and staff of a program. Both conceptual tools exist as idealized theory, but more importantly, both are grounded in actual experience: public spheres are identifiable by their communicative acts and curriculum maps are brought to life during pedagogical moments. Connecting the two, curriculum maps are both artefact and tool of public sphere discourse. As an artefact, curriculum maps bring light to the empirical boundaries of a program and the publics involved by identifying faculty member involvement, student involvement, and the locations of interaction throughout a curriculum landscape. As a discursive tool of the public sphere, mapping fosters interest and dialogue within a public sphere by focusing group attention on specific curriculum areas.
Within a public sphere the process of mapping and resultant maps may be considered enabling or constraining in relation to the fostering of open discourse. The primary concern of public sphere discourse is rational critical argument between group members fostering new understanding and social integration. If curriculum is forced upon faculty members in the form of a curriculum map, mapping could be considered a constraint interfering with open and meaningful curriculum discussion. On the other hand, when mapping is utilized as a tool of transparency regarding curriculum issues and concerns within a program it becomes an enabler of faculty engagement. Maps enable the public sphere by bringing new information to members of the group who otherwise were disadvantaged by ignorance. Put simply, faculty members cannot richly debate topics about which they have no prior experience or knowledge.

Well like any other learning process it was a really good first step for me but it raised more questions than I had in the first place. So when you don’t know that something is out there, you have very few questions. (Interview 23:269)

By forcing the organization of information and bringing otherwise hidden areas of a curriculum to light, maps address the issue of transparency among faculty members co-inhabiting the public sphere bound to the program. Furthermore, the mapping process identifies those areas of the curriculum that require further discussion. The conception of curriculum mapping and the use of maps by an academic public to focus discourse and bring light to otherwise hidden information is consistent with the use and forms of maps in the broader public sphere. In the broader public sphere, maps are used to order both our physical and social worlds, bringing new information, such as the location of parks, libraries, restaurants, transit, plays, meetings, or the location and details of one’s home to the attention of those needing the information when needed.
These maps act as tools of public discourse by organizing and storing essential information necessary for transparency and the provision of background information when needed. Transparency and the availability of information is a pre-requisite condition for the rational and critical debate that distinguishes public sphere discourse from entertainment, marketing, or propaganda.

The curriculum map as an organizer of information is consistent with the concept of a “topographical field of meaning” used by Gerhart and Russell (2004) to describe how we cognitively order information related to a topic or conceptual construct, such as curriculum. As a digital representation of the experiences and ideas embedded in a program, a curriculum map acts as an attractor for the group to envision a possible future or solve curriculum-related problems. An attractor is considered a focal point for focusing discussion in an effort to address an issue’s true depth and complexity.

Without specific problems to solve and attractors for focusing discourse, conversation risks being too general or being too disconnected from the root problems that ignite the need for public sphere debate in the first place.

Curriculum mapping and public sphere thinking are complementary analogic extensions of a broad learning metaphor based on notions of place and travel. From this perspective, an undergraduate program of study, such as the BPEC program, represents both a physical and cognitive lifeworld constructed, inhabited, and explored by both students and faculty members. This conception of curriculum mapping and public sphere thinking is grounded in the epistemological position that sees knowledge as socially constructed by groups and reinforced through community use. Shared understanding (verstehen) in this view is achieved through communicative experiences
of participants in intersubjective relations established through symbols (words, maps, images) with other individuals (Habermas, 1998). Of importance to this conception of local and socially constructed understanding is that Habermas (1998) acknowledges that intersubjective relations, not only happen when face-to-face, but also happen when individuals are alone with “a book, a document, or a work of art” (p.29). Curriculum mapping as a process can be a site for establishing the initial public sphere conditions necessary for rational critical discourse, and as community artefacts, curriculum maps have the potential to promote ongoing communicative acts within the public sphere by those that use them as tools for induction, analysis, review or further group discussion.

The notion that maps and public sphere thinking are two metaphorically consistent theoretical and practical components of a possible curriculum development process are carried forward into proposition four below to describe how academically situated publics are mobilized by either vision, problems, or both, and how mapping serves this public sphere need.

**Proposition 4: Public Spheres are Mobilized by Vision, Problems, or Both.**

One of the key innovations of the bourgeois public sphere described by Habermas (1962, 1989) was that “discussion within such a public presupposed the problematization of areas that until then had not been questioned” by the participants (Calhoun, 1992). This idea that new thought could take seed and flourish in the public sphere, then come to influence the political and economic spheres was central to arguing for the power of democratic process in society. In curriculum development it can be argued that the two primary drivers of new thought are visioning of possible futures
and solving emergent problems. As a form of nested public with decision-making authority over local curriculum and pedagogy decisions, an academic community resembles a public sphere with the exception that the issues and concerns that are problematized are organized around the faculty and student lifeworld related to the curriculum.

In this study, the public sphere characteristics that were fostered did give rise to new issues being problematized within the discussions surrounding curriculum mapping. The strongest example was the presentation by a faculty member that the Douglas College Academic Signature represented a quantitative bias and as a result contributed to an imbalance of attention between qualitative and quantitative methods of inquiry. This issue of qualitative inquiry was not on the original agenda of the mapping project, however, space was allotted for discussing signature items, which is when the issue arose. Once raised, time was given for discussion, and an emergent consensus led to the inclusion of ‘qualitative inquiry’ as a new Sport Science Signature item in the Currickit survey. A commitment was also made by the group to afford the issue more time at future meetings to further develop the definitions and outcomes that would help lead to a shared understanding of qualitative inquiry for department members.

A second rallying point for this public occurred when asked near the end of the process, “Now what?”, meaning “Where do we go from here?” The discussion of results during the review phase of the intensive period was most animated during discussions about the DCAS outcome of ‘written communication.’ This competency was highly assessed and lightly taught throughout the program. The primary causes of faculty concerns could be identified as: 1) trying to understand the shifting literacies of a
digitally native student population, and 2) a lack of clarity throughout the program regarding expectations for written assignments. The 'problems' surrounding written literacy were sufficient resulting in a pledge of action (communicative act) by faculty members. Written communication was chosen as the first competency the group decided to address fully in the post-research phase of this project (see CMRP Report to Faculty #3, Appendix J). There were many other potential areas of concern or interest discussed by the group during the review that were not supported by a group pledge of action. For example, the Currickit data and MS Excel data highlighted the fact that all but one course in the program had a professionalism or contribution mark, yet what those competencies entail was only taught in a fraction of program courses. Faculty members raised their discomfort with the mixed standards throughout the program during group discussions; however, at the end of the day, this concern was not rewarded with the same call to action that written communication issue was.

It is safe to say that the way we actually deal with curriculum is actually in a problem-based way, so that you might bring to a faculty meeting a problem that came up in a fieldwork seminar that came up around coaching knowledge. So you might say "I had this situation where my fourth year students just simply could not perform to the coaching standard and expectations that we say we are doing." At that point in time, that's when the discussion starts around the specific thing that the problem is based on so that the discussion starts around coaching knowledge, and then therefore then people will want all the detail of the map. Interview 13:20

Once a map is co-constructed by faculty members and imbued with the trust that is derived from dialogue that results in shared understanding, the curriculum map begins to take on a potentially authoritative role as an artefact created through public sphere discourse. The updating and nurturing of the map over time will add to its authority and as a result the map has the potential to become a site of organization for solving curriculum-related problems.
One issue that was persistent for faculty members was that they unanimously felt that a trusted map would help with the 'letting go' of curriculum and the allowing for more depth in coverage of specific outcomes. As an external referent with authority, a curriculum map was seen as an enabler in this regard.

And you know what. I think as a professional if you saw the map, you would buy into the letting go a lot easier. It’s when you don’t really know. “Oh yeah we had that meeting and so and so said they were going to do that” and you’re like “ya, what are the chances that is really going to happen.” But where there is a department mapping process and then you can say, “I've got some second year students in my class and I challenge them to do this content but they didn’t have the pre-requisite skills, let’s talk about the first year. What is happening in those first year courses.” Do you see what I mean, you have something to peak into to say a) if it is being done well and if it is not, how can we maybe tweak it to make better prepare them for their second year and then third etc. (Interview 13:186)

Curriculum mapping in this regard becomes a tool of the public sphere for focusing on and strengthening discourse that arises within the academic public surrounding the curriculum. The versatility and quality of the tool and associated discourse relates directly to the quality of the data and trust given to curriculum maps by faculty members. In this exploratory phase of the project, a fully shared understanding was not reached, which limited the problem solving and visioning potential of the maps created in this project, however, as tools of the public sphere, their use was validated both as a dialogue starter during their co-construction, and as a potential attractor around which future discourse is ordered.

Proposition 5: Public Sphere Thinking Combined with a Learning Metaphor Connected to Place and Travel Gives Rise to a Curriculum Village

A structured program complete with its maps, entrance requirements, rights-of-passage, and leaving rituals, can be considered one of many empirically definable
curriculum villages co-existing and inter-connected throughout the public sphere. The boundaries of the village are blurred but traceable around program requirements resulting in the inclusion of all those human, intellectual, and material resources that contribute to the fulfilment of graduating requirements for students.

Faculty members organized around the curriculum mapping project in this study are only one public in the BPEC curriculum village. To fully expand the metaphor of learning that relies on images of travel and place into the idea of a curriculum village, public sphere thought must embrace the existence of multiple publics nested, overlapping, interconnected, and at times, temporarily convened to deal with visioning and problem-solving related to life in the village. In this metaphorical expansion, students form one of the nested publics in the curriculum village. Fraser (1990) makes the distinction between ‘strong’ and ‘weak’ nested publics within the public sphere and concordantly within stratified organizations. Strong publics are those that have authoritative decision making power. They are made strong by “force of public opinion” translated into decision making. Faculty members’ authority to decide on curriculum makes them a strong public. Students represent a weak public. Their deliberations and input to decision making dialogue may give rise to great insight, however, they are reliant on an authority to turn their voice into curriculum change. Empowerment and interconnection between weak and strong publics is a necessary goal along the path toward a democratic and fully integrated society (Fraser, 1990).

Unfortunately, the mapping process undertaken in the exploratory research phase of this project did not reach a stage whereby the maps were trusted enough to present to students to receive their input. Faculty members, nonetheless, held the
students at the centre of the mapping process throughout. Students were portrayed
during interviews as both the centre of their efforts and agents of their own learning in
the program. Having faculty recognize students as more than receivers of knowledge is
seen as an important pre-requisite for moving from a flat knowledge mapping metaphor
to multi-dimensional metaphor of an inhabited curriculum space or a village. Alexander
(2005) suggested that when we codify learning into curriculum objectives without
remaining cognizant of the role of student self-determination, we ‘flatten’ the role of self-
determination in student learning which undervalues the role of student agency in
curriculum matters:

There is a deep tension within a curriculum that offers an account of what is most worth
knowing, which is what the Tyler rationale proposed to do, but that flattens the self-
determination of students; for the very idea of something being worthwhile requires the
assumption that within reasonable limits students are agents of their own desires, beliefs and actions. (p. 349)

Students and faculty are co-agents in the learning process or co-inhabitants of
the curriculum village. Co-agency, does not suggest that they are decision-making
equals, but does suggest that a failure to recognize students in the curriculum process
risks a loss of diversity and voice within the public sphere, which in turn, limits the
quantity and quality of rational critical discourse. One faculty member expressed his
desire for an inclusive public by suggesting we engage students more regularly in an
“open and honest” dialogue about the curriculum and pedagogy of our courses.

I think this was another distinct element about our degree, is that once that our students
hit third and fourth year I think - the ability to engage them and learn from them and
recognize that - we as instructors are now more probably a facilitator than we are
instructor really allows myself to really look at a course and reflect on how it’s being
taught and think you know what? From the student’s take on what we do with home
learners we should try this now. (Interview 14:225)
Because I just think they’re now at a point where we shouldn’t shy away from an open honest dialogue with our students about why we teach the course the way we do. (Interview 14:249)

Students were recognized by faculty as the primary inhabitants of the curriculum village throughout the interviews and mapping process. Faculty regularly referred to student agency and positive student experiences as catalysts to their personal curriculum change efforts in the past:

I like students to feel that they can contribute to creating something out there. A future for themselves. And so that’s beyond how can I make sure I have someone who’s competent to do the job that’s already there? Uh-uh. I want someone who leaves thinking “I’ve got these great skills. I feel like I can create. I can create a different community in which I’m part of. (Interview 7:205).

I think everybody - wants the students to come up with the - best knowledge and education they can. And if we recognize that - like I said once we’ve agreed upon which - signatures we want, because it has to be agreed upon by - everybody. Then the buy-in is there to make sure that - we do deliver that to the students. But I think everybody in the faculty is here - for the students. (Interview 22:165)

I think that before looking back at this I think that my motivation is to not let student down. So regardless of what they want to do. Whether they’re going to graduate from here and then go and become teachers that they never feel that they didn’t get the education or knowledge or beliefs or values that they were supposed to get from our program. (Interview 11:301)

When mapping based on public sphere thinking was introduced as a way to organize a curriculum landscape the interdependence of students and faculty members’ transformed a flat landscape into a vibrant village. The curriculum village metaphor involves a number of analogic insights that also emerged during the project. To explore the theoretical and practical implications of these insights each of the following points is expanded under its own sub-heading below:

- Curriculum villages are grounded by program structure
- Curriculum leadership resembles stewardship within a curriculum village
- Curriculum villages strive to localize external curriculum
Public sphere thinking keeps a curriculum village open to change

**Curriculum villages are grounded by program structure.**

Faculty and students need landmarks and waypoints to explore and navigate throughout their shared curriculum village. Beginning with entrance requirements and orientations and ending with graduation requirements and celebrations, the curriculum village is conceptually grounded by course requirements and course sequences. That is to say, that the definition of course sequences, pathways, and requirements within a program becomes the curriculum village’s equivalent of a physical landscape upon which the curriculum lifeworld exists. Program structure is relatively stable over time creating a solid place to build nuanced understanding of course by course curriculum-related experiences over a four to six year student journey. In mapping terms, course sequences and graduating requirements are the base layer of a curriculum map (see Figure 24). The boundaries of the village are loosely drawn around course requirements of a program and the more rigid the requirements, the more recognizable the village becomes to its members.
On top of the base program structure, additional layers of information relating to curriculum detail and student experiences become understandable. This concept is demonstrated in Figure 25, wherein, program structure is used as the base onto which the DCAS level three competency of quantitative reasoning (QR) is animated by clicking on it. The map is set to show one-degree of freedom for each selection which leads to two courses, an instructor, and associated DCAS competencies being highlighted in relation to level three QR. The existence of a stable base for mapping this secondary layer of curriculum intention allows community members to locate overlapping interests (click on a DCAS or SSS competencies), to locate areas of stewardship and responsibility (click the instructor buttons to demonstrate who teaches where in the program), and to locate a number of other curriculum concerns of interest, such as, course sequences, program flexibility, and subject area expertise of faculty.
A note of caution is in order when considering program structure to be the curriculum equivalent to the geographic base of traditional maps. A curriculum landscape is born from community efforts to envision and then articulate a possible course of studies that may not have existed prior its creation. The BPEC degree, for example, was designed first as a set of goals, which were given structure through the selection of courses to achieve those goals. Program structure, therefore, is not simply descriptive. It represents a communicative act by the founders of a program. New faculty members who arrive in this curriculum village arrive to a history and structure that may feel constraining to their curriculum freedom due to the past development and history of a program. From this perspective, if agency is a consideration of the
curriculum development project, the ability to change program structure is an important permission afforded to a group reviewing and problematizing curriculum concerns.

**Curriculum leadership resembles stewardship within a curriculum village.**

As part of outlining a definition for the scholarship of curriculum practice, Hubball and Gold (2007) ask the question: “Who is responsible for undergraduate curricula?” Although the original question was a discussion starter, one clear answer that arises from within a curriculum village is that the faculty and students involved in creating and enacting the curriculum are responsible. Within a curriculum village, faculty feel responsible to students and the content and outcomes of the courses they teach. In addition, they hold themselves accountable to the other members of the community and community goals. From this interpretation of responsibility, the concept of “stewardship” arises as a way of understanding curriculum leadership within a village metaphor.

Insight into this element of the curriculum village became apparent when individuals were asked if they were leaders of a course for curriculum development purposes or whether they made changes as part of a group. Although many courses in the BPEC program have multiple instructors, all instructors felt that there was at least one course in the program that they led and exercised stewardship over its curriculum. If an instructor deemed him or herself a leader of a course curriculum, it was typical that another instructor would deem him or herself a follower or part of the group that develops for the same course. No course had leadership conflicts and no two instructors identified the same course as their primary space of curriculum leadership.
The use of the word stewardship versus ownership when referring to curriculum leadership is in alignment with the ideals of public sphere thinking. Curriculum is a summary of intentions and ideas from multiple publics. Quality ideas are those that have survived public sphere tests, that is to say, they have been debated widely and consensus has formed around their utility to a discipline, profession, society, or individual development. Curriculum resulting from public sphere discourse can be said to have been forged through a rigorous social process, not a private one, therefore, stewardship of curriculum is better aligned with public sphere thinking than notions of ownership or private property. Stewardship as a public sphere construct is challenged at sites in the curriculum where feedback or opportunities for dialogue are limited. This challenge is most prevalent when a course is only offered once per annum and only has one instructor. The existence of multiple instructors, teaching multiple sections of a single course, forces interaction around curriculum topics.

From a facilitator’s point of view, the fostering of public property ideals and the promotion of stewardship in place of ownership becomes an overt goal of a curriculum development process deploying public sphere thinking. Mapping and a curriculum village metaphor rely on inter-dependence and shared interests across a program. This interdependence brought to life by mapping connections throughout the curriculum village creates opportunities for previously unproblematized curriculum-related issues to arise and provides the opportunity for new groups to go in and out of existence in relation to the discursive needs of each issue. As issues arise, the stewards of curriculum areas (both courses and meta-curricular competencies) are charged with discussing the impacts of the change on their particular section of the village. If the
communicative action of the group is to enact a curriculum change, it is the faculty members who assume curriculum leadership at the course level that will facilitate course-level discussions aimed at localizing an initiative.

**Curriculum villages strive to localize external curriculum.**

Ironically, while mapping and public sphere thinking may reduce notions of curriculum spaces (courses) as private property, curriculum villages are also insular enough that external curriculum must go through a process of localization before it is accepted. Localization of curriculum in this regard refers specifically to assessing a curriculum’s utility with regard to meeting desired program outcomes. The stronger and more identifiable the local goals are, the easier it is to establish whether an external curriculum can be articulated locally, and if so, whether or not it helps meet local educational goals. Localization can be considered a fractal phenomenon. First external requirements are assessed at the program level, then they are again assessed and articulated at the course level. If utility does not exist at the course level, then program level acceptance is a necessary, but insufficient condition for successful adoption of external curricula.

In the case of the Douglas College Academic Signature (DCAS), the signature was available for over two years prior to this curriculum mapping project. Due to a lack of local attention, the DCAS has undergone very little local application other than by those who had taken one or two competencies to heart and seen the advantage to their students of making changes in their courses related to a competency. This lack of localization was evident based on the fact that when asked about the DCAS in pre-interviews, faculty members were unanimously unable to recall more than one or two
themes from the DCAS without prompting. In the absence of policy or coercion forcing attention to the DCAS, the alternative means of determining its utility was to problematize it in the public sphere. Mapping provided a curriculum development vehicle to do this, however, the worth of the DCAS to the department was not pre-judged by the choice to map both the DCAS and the SSS. If the DCAS and SSS were still deemed of little utility in day-to-day teaching and curriculum planning, then issues like cross-curricular competencies can be considered of lesser priority than other issues competing for faculty attention.

There were two strong examples of localization that were discussed during this study. The first is the adoption of the Sport Science Signature (SSS) item ‘qualitative reasoning’ in reaction to the DCAS competency ‘quantitative reasoning’. The SSS competency was a local response (communicative action) deemed necessary by the group in order to adopt the DCAS competency. Localization in this case took the form of counter-balancing the external requirement (un-enforced as it was). The other primary example of localization of external curriculum, integration of ten National Coaching Certification Program (NCCP) modules throughout BPEC courses, was discussed during preliminary interviews with faculty members, but not addressed directly during mapping or secondary interviews. In order to provide NCCP certification as part of the BPEC degree, there are ten learning modules that must be completed as part of the program. The program and the instructors were given autonomy as to how to handle the curriculum and since 2007 they have been refining their approach after each additional year of experience. The general sense shared by faculty members during preliminary interviews was that the external curriculum was originally seen as lacking
academic rigour, however, it has now been successfully integrated through adaptation into all the necessary courses. At the time of preliminary interviews instructors were generally accepting and supportive of the initiative. Factors contributing to the successful localization of NCCP relate directly to the attention paid to it by faculty members and the department. As a graduating requirement of the program, NCCP modules cannot be avoided by faculty members. Furthermore, the BPEC program has a dedicated Coaching coordinator that works with faculty directly, holds annual reviews, and liaises with the NCCP to protect local autonomy by maintaining external confidence in faculty members’ delivery of the modules.

Localization of external curriculum is a value-based act if undertaken in the absence of formal requirement. In order for the DCAS to be fully realized within the BPEC program local stewards of the curriculum must, through a process of rational critical debate and testing, determine the utility of the DCAS to their individual areas of concern. If positive attitudes and interest in the DCAS represent the prevailing attitude of the village toward the external curriculum, then stewards of the DCAS competencies will also emerge bringing regular attention to the curriculum in order for it to be properly Problematized by the group. If the value of DCAS to the department grows, communicative acts in the form of curriculum change will emerge from the discussions. In this study, the results showed that a positive but cautious attitude was identifiable in relation to the DCAS. The caution was due to in part based on the instrumental assessment by faculty members regarding the time and effort needed for localization versus the use of that time and effort for other professional development and other curriculum priorities.
Public sphere thinking keeps a curriculum village open to change.

When does group cohesion become a disadvantage? With regard to curriculum the answer can be drawn from public sphere thinking. Group cohesion becomes a disadvantage when a group stops trying to test its ideas (curriculum) in the form of legitimization against other publics. The ideas of a village can become anaemic or stuck in time if it disconnects from surrounding sites of discourse and critique. The development of local knowledge can become self-reinforcing and local ideas need to be tested in the “outside world”. Perhaps, the structural legitimization deficit created by the ‘sending’ status of this program in relation to the ‘receiving’ status of local Universities, mitigates the risk of this particular curriculum village becoming too isolated. Articulation demands reinforce the need for critical rational discourse around the program curriculum as it relates to other curricula in the province of British Columbia in similar programs.

Another aspect of public sphere thinking that protects a village from producing incestual thought is its focus on keeping the public sphere open to new members, new problems, and new thought in general. Unfortunately, the exploratory nature of this project and its exploratory status led to a few formal exclusions that undermined a declaration of full openness to new members. The three most notable formal exclusions were the students, external curriculum partners (NCCP and BCRPA), and internal curriculum partners (English, Biology, Math, etc.). Fully formed maps representing all program elements would be co-constructed with all these members of the BPEC curriculum village. Speaking specifically to the inclusion of students, students were considered by faculty members to be the primary inhabitants of the BPEC curriculum
village and as such, they have “a legitimate claim to a say” and “a stake in its *modus operandi*” (Fraser, 1990, p. 76) of their program. According to Fraser (1990), exclusions do not necessarily undermine the application of public sphere thinking, nor the instrumental need to have reduced the size of a public to foster focused rational debate. As long as a connection to the greater public is maintained through the nested layers of organizational publics, reduction may be necessary at a time of regrouping.

“Habermas captures well this aspect of the meaning of publicity when he notes that however limited a public may be in its empirical manifestation at any given time, its members understand themselves as part of a potentially wider public, that indeterminate, empirically counterfactual body we call “the public-at-large”. The point is that, in stratified societies, subaltern counterpublics have a dual character. On the one hand, they function as a place of “withdrawal and regroupment; on the other hand, they also function as bases and training grounds for agitational activities directed toward wider publics.” (Fraser, 1990, p. 68)

Although Sport Science faculty members were the selected group for this mapping project, there was significant evidence of them maintaining their connection to other extant publics that combine to form the curriculum village (students, faculty and staff) and wider academic public concerned with undergraduate physical education and kinesiology programs in BC (Human Kinetics, Kinesiology, and Physical Education departments).

A curriculum village metaphor for understanding curriculum development gives rise to both positive and negative imagery. Overly cohesive groups may limit the freedom of independent thinkers, they may shelter their thinking from outside opinion, and they may struggle to bracket their own power in the face of challenges from within. Public sphere thinking helps to mitigate some of this risk by having the group maintain the shared public sphere conditions of gathering and making accessible information, bracketing their individual powers, and participating in rational critical discourse around
curriculum topics. Public sphere thinking in tandem with the social features of caring and responsibility evoked by a village metaphor points curriculum developers interested in faculty agency towards facilitation and information organization processes that, 1) are grounded in clear program structures so faculty can continually ‘locate’ and problematize curriculum concerns as they arise, 2) engender shared ownership of curriculum initiatives through a fractal process of localization, 3) foster notions of stewardship over ownership of curriculum, and 4) embrace critical rational debate as the desirable form of discourse for discussing curriculum issues.

**Proposition 6: Organization of Curriculum Development Using Public Sphere Thinking Positively Influences Curriculum-related Agency**

Based on the examples provided in the results (Chapter 5) and the discussion of propositions one through five above, it should come as no surprise to suggest that agency is positively affected by applying public sphere thinking to curriculum development processes such as curriculum mapping. Public sphere thinking is directly aligned with fostering the three pre-requisite conditions of human agency described by Alexander (2005). Public sphere conditions support information transparency in an effort to help individuals develop necessary background knowledge and **understanding**. Public sphere conditions aim to create communicative freedom, which is a form of actual **freedom**. Public sphere conditions allow for influencing of **beliefs and values** among members as the community strives for mutual understanding and consensus. The impacts of the process deployed in this study were evident with regard to increasing both understanding and perceived freedom as reported in the results section. There was also an impact on beliefs of individual faculty members with regard to what should
count as research derived knowledge (i.e. the changes to the Sport Science Signature to add ‘qualitative inquiry’). To further investigate the role of public sphere thinking and curriculum mapping in the shaping of understanding and beliefs, it must be recognized that understanding and beliefs are inextricably linked. To focus on Alexander’s (2005) pre-conditions for agency as categories is to overlook the process that occurs that forces reshaping of understanding and beliefs in tandem. Strong internal assessment of options or new information is needed for an individual to consciously change his or her beliefs, while strong public debate gives rise to the conditions forcing internal assessment.

Strong assessment is required when a challenge to existing beliefs and understanding occurs due to new information or problematization of previously unconsidered issues. In public sphere theory challenges to current ideas come by force of better argument, which if accepted by the individual, may lead to a reshaping of internal understanding, beliefs and values. This is a highly rational model of cognition and belief that is open to challenge based on the considerations that interpersonal affiliations (emotive considerations) may lead to the suppression of rational choice in favour of group membership. On the other hand, if interpersonal connections can withstand rational critical debate and administrative power can be actively bracketed by individuals, curriculum dialogue representing public sphere conditions will undoubtedly raise challenging points for the individuals involved. If the challenge is significant enough to cause tension between the domains of assessment (originally domains of agency) described by Schwier et. al. (2007), namely the institutional, societal, professional, and interpersonal domains, then a prioritizing choice must be made by the
individual as to which moral commitment will be honoured. Internal rationalization of one’s choice may lead to shifts in underlying beliefs. Public sphere thinking leading to rational critical debate around curriculum issues ultimately bolsters agency by forcing strong assessment about curriculum issues problematized for the group.

Gerhart and Russell, (2004) provide an alternate but compatible description of how individuals come to change their “topographical fields of meaning” (beliefs and understanding) created to organize their thinking about a topic or interconnected set of topics such as an undergraduate curriculum. The beliefs and underlying metaphors that help us organize fields of meaning are subject to expansion (analogic acts), or significant shifts due to significant changes in our mental organization due to new metaphors taking over old (metaphoric shift). For those individuals in this study who already held beliefs about learning and knowledge consistent with internal constructions of reality, the new knowledge gained during mapping and representations of learners as travellers through their program represents an analogic act. During an analogic act, an existing field of meaning is expanded to hold new information. In order to truly distort and reform a field of meaning a “disruptive cognitive act” is needed. A “disruptive cognitive act, … forces an uncalled-for analogy within or between the fields of meaning—a distortion of one or both of these fields” (Gerhart and Russell, 2004, p. 23). For some faculty members, the consideration of students on a learning journey, navigating, exploring, and arriving may have been a disruptive notion to pre-existing cognitive models involving students receiving, processing, outputting, and passing. Reconciling this disruption requires reordering how instructional and assessment methods layer onto more deeply held beliefs and understandings of internal versus
external constructions of reality. Disruptive cognitive acts are good descriptors for what is meant to occur during public sphere discourse. Over time, a normative consensus is meant to build around the best ways to topographically structure a field of meaning. Eventually, an independent thinker will bring new insight to the public sphere and disrupt the entire field of meaning.

When true re-organization of ideas is needed due to a cognitive disruption, “the newly shaped field constitutes a better construction of what we already know” (Gerhart & Russell, 2004, p.25). As a facilitator/researcher/participant in this mapping project, a number of cognitive disruptions resulted in analogic expansions of existing meaning and the creation of a new metaphor for understanding curriculum developed. The investigation of public sphere thinking, curriculum mapping, deeply held connections between travel, learning, and place, and the identification of curriculum villages have created a more textured topographical ‘field of meaning’ for understanding curriculum development practice and the fostering of faculty agency.
Chapter 7: Mapping Facilitation Considerations

The relationship between publicity and status is more complex than Habermas intimates, that declaring a deliberative arena to be a space where extant status distinctions are bracketed and neutralized is not sufficient to make it so (Fraser, 1990, p. 60)

Mapping represents an opportunity for curriculum discourse to be translated into powerful communicative acts representing both the shared understanding and communal goals of a group. This study showed that success was not guaranteed simply by the presence of a group willing to participate in the process. In order for mapping to reach its potential, the goals, methodology, and facilitation must align to allow forms of discourse wherein new understanding emerges from old. Furthermore, facilitation of the public sphere conditions that foster desirable discourse must also support the existence of emotions and the imperfect nature of applying public sphere theory to workplace settings. Facilitators of curriculum mapping and curriculum development in general face local discursive conditions and relationship dynamics that not only vary from situation to situation, but also, vary across the duration of a project. Facilitators adopting public sphere thinking are required to demonstrate sensitivity to issues of induction, power, and relations through the course of a project and the ongoing creation of generative conditions for curriculum discourse. In this study, for example, one-third of the faculty members had less than 4 years experience with the department leading to a shift in purpose during the project wherein the early discussions were educative for participants
in order for later discussion to be more dialectic. Understanding this flow of purpose within one’s project may be easier said than done. Attention to program structure, history, and group member understanding of curriculum and pedagogy are all areas of concern for a facilitator interested in fostering agency by utilizing public sphere thinking.

Relying on the curriculum village metaphor discussed in Chapter 6, this chapter begins with ‘village-wide considerations’ that aim to help the facilitator identify the purpose, inhabitants, and curriculum structure, influences and traditions that shape the curriculum discourse of a department or group of educators. The second section addresses individual considerations that relate to the components of agency. By attending to individual concerns, the suggestion is that a facilitator can consciously increase the agentic potential of individual faculty members by responding to their individual needs in relation to becoming fully contributing members of public sphere style curriculum discourse. The third section of this chapter addresses facilitator considerations regarding the forms of curriculum representation (maps) and the methods (discussion, surveys, charts, and maps) chosen by a facilitator. The relationship between public sphere thinking and curriculum representation forms relates to the goal of a public sphere creating strong communicative acts (curriculum documents). If the curriculum representation (maps in this case), does not live up to the expectations of the community with regard to representing the richness of their experience and discourse, the communicative act is weakened, thereby undermining the potential future of similar communicative acts. Insights relating to data leveraging, minimum levels of understanding needed for strong communicative acts, and technology choices are discussed to bring light to the relationship between the
curriculum representation considerations and public sphere thinking. This chapter closes with a brief discussion of the imperfect nature of workplace settings in relation to public sphere ideals. Facilitators who adopt public sphere thinking may wish for pure rationality and perfect bracketing of administrative or systems power by community members, however, real world considerations and the need for caring and sensitive facilitation cannot be ignored due to the interpersonal considerations and the co-dependency of faculty members who inhabit workplace settings.

**Village Considerations: Understanding the Community**

In order to foster public sphere conditions during curriculum mapping procedures and discourse, there are a number of group and program considerations that can be taken into account by curriculum facilitators that may help to foster public sphere style dialogue and thinking by those responsible for a specific course of study. The program requirements, participants (faculty, students, staff, external agencies), and purpose constitute the quantifiable boundaries of the curriculum village, while the curriculum freedoms and traditions represent the social and political influences on development within the curriculum village. The results of this study reinforced the notion that transparency of curriculum structure and identification of curriculum freedoms were positive supports for faculty member agency. In this regard, the identification of curriculum structure, program goals, political influence, curriculum norms and traditions and the making of these influences transparent is considered necessary in order for the bracketing of the administrative power in the system required to achieve public sphere conditions. In an effort to draw attention to key 'village considerations' for facilitators, six
questions are presented below that are then used as sub-headings to discuss each item in turn.

1. What is the village’s raison d’être?

2. Who inhabits the curriculum village?

3. What is the base layer of the curriculum landscape?

4. What are the actual decision making freedoms of the group?

5. What are the external curriculum influences and ties to other sub-publics?

6. What traditions of curriculum discourse exist in the village?

**What is the village’s raison d’être?**

The mandate of a program, the goals of a program, the characteristics of an ideal graduate, the program purpose … these are all ways of identifying a curriculum village’s raison d’être. There may need to be a collection, debate, and prioritization of these expressions of purpose due to the surprising number of views that may coexist. Wolf (2007) and his colleagues at Guelf University use the identification of the ‘characteristics of the ideal graduate’ to localize a program’s purpose for a department or program. Without being asked directly, faculty members identified the need to discuss the ‘big picture’ and ‘characteristics of graduates’ during the pre-mapping interviews.

The results of this study showed that assuming new faculty members held a strong sense of program purpose and that that purpose was consistent with the purposes considered important during program development was a risk to the curriculum process. After the first interviews identified a desire to revisit ‘big picture’
ideas and ‘ideal graduate characteristics’ the opening session of the intensive mapping phase of the project spent time revisiting the program history and discussing the program mandate and characteristics of ideal graduates. Given that the identification of program purpose will be one of the first discussions with a group of faculty members, the fostering and modelling of public sphere style debate can begin with this discussion. A shared purpose forged through public sphere style discussions will take on the communicative power necessary to serve as a touchstone or landmark during subsequent and more detailed curriculum debate.

Who inhabits the curriculum village?

There is a quantifiable set of people who are responsible for constructing and enacting curriculum within a program. The obvious participants are the students, faculty, and staff that support the overall program and courses. From a curriculum facilitation perspective, the naming of these individuals leads to their conscious inclusion or exclusion in curriculum process. For example, in this study, students and external departments were excluded during the exploratory phase of this mapping project based on the feeling that sufficient insight would be gained about both the curriculum and the mapping process by including the 13 faculty members from the Sport Science department. The second exclusion was the students, however, this was a temporary exclusion, that again, relates specifically to the exploratory nature of the project and the fact that the products and process of mapping were unpredictable. In the BPEC program, external faculty members from English, Math, Biology, and Philosophy and the students are identifiable curriculum village members that at some point should be part of
a curriculum debate in order for the communicative acts to be fully representative of their involvement in the enactment of curriculum throughout the program.

When exclusions are necessary, whether due to practicality, workplace based commitments, or conscious exclusion as occurred in this case, recognition of exclusions is required to maintain transparency and public sphere ideals. Furthermore, a commitment to opening up a discourse to all members should be maintained if shared understanding emerges out of a mapping process. In this study, once the mapping process was deemed effective, the inclusion of English faculty members was discussed during exploration of the ‘written communication’ competency identified by the Sport Science department as a priority for proceeding with mapping in the post-research phase.

**What is the base layer of the curriculum landscape?**

The base-layer of the curriculum landscape is the layer of curriculum definition in a program that is relatively fixed and understood by participants in the program as the landscape within which their particular interests (courses, experiences) exist. In the BPEC program, this base layer was identifiable as the program entrance requirements, course sequences and graduating requirements. The ability to place courses in sequence and identify pathways through the program gave the mapping analogy the equivalent of the material layer in the physical world. Detailed information relating to student experience, instructional techniques, assessment considerations are added on top of this base layer during either the accounting of existing program elements, or during the design of a new program. The particular framework for organizing the lived experiences of a curriculum on top of the required program elements requires local
consideration. In this study, there was a clear preference for visual representation of curriculum that laid out curriculum in a sequential fashion based on semester considerations.

**What are the actual decision making freedoms of the group?**

The relationship between perceived freedom, actual freedom and curriculum agency was discussed in Chapter 6 resulting in the suggestion that transparency of actual freedoms allows alignment to occur between perceived freedom and actual freedoms resulting in a positive impact on faculty members' curriculum-related agency. For the facilitator, this brings to the fore the need to identify and articulate actual curriculum freedoms with the group. Actual freedoms are restricted by policy and community expectations. Policy restrictions relate to the permissions faculty members have with regard to changing pedagogy, curriculum, assessments, and actual curriculum guidelines for their courses. Some changes don’t need any approval by the local community, some need local approval, some need institutional approval, and some need external approval. In the case of the BPEC program, pedagogy and curriculum internally related to a course does not need group approval, however, where impacts on others are recognizable, group discussion is expected. Changes to course guidelines that are passed by the Douglas College Education Council do require local approval and external approval in the form of re-articulation with receiving institutions in the BC post-secondary system. Changes to program structure require local, institutional, and external consultation before being approved. All aspects of the program can be changed and the fore-grounding of actual freedom requires an explanation of policy and process for change by the facilitator or other experts within the curriculum village.
The community expectations of curricula, are perhaps more accurately described as perceived limiters to freedom, however, the strength of group influence and the power of communicative acts within the group makes the perception a reality for some. Course-to-course variations in freedom will exist based on the interdependency of courses in the program relating to content and expected student experiences. For example, a foundation-year writing course may be a pre-requisite for all upper-level social science courses in a curriculum requiring the instructors of the writing course to limit their instructional and assessment choices to the pre-defined competencies needed for upper-level success.

The purposes of foregrounding actual and perceived freedoms within the public sphere are first and foremost directed at allowing those who unnecessarily restrict their agency due to low levels of perceived freedom to feel liberated. Secondly, the recognition of variability in freedoms throughout a program aids in the bracketing of power held by some over others due to intra-program position of courses and related requirements. Thirdly, foregrounding actual and perceived freedoms allows for problematization of issues relating to curriculum freedom across the village. In the case of the BPEC curriculum, the articulation requirements of first and second year courses was problematized a number of times by faculty members teaching those courses which led to specific discussions about the limits of their actual freedom in those courses. In all cases, the perceived freedom of faculty members in articulated courses was lower than the actual freedom that became identifiable during group discussion.

It was mentioned that actual freedom may include permission to change program structure (the base layer of a program). In the case of the BPEC program, this freedom
was discussed during the mapping process. The process and nature of curriculum structure changes were discussed as longer term processes (up to 2 years). However, in order to maintain a sense of communicative freedom and group agency, it was deemed a necessary discussion to have. As a result of program structure discussions a several degree changes were proposed in December, 2010 and have been running their course through internal and external consultations since their introduction. For many faculty members, this degree of influence may have seemed beyond their horizon of influence before experiencing the mapping process and engaging in discussions relating to curriculum freedoms, program history, and curriculum stewardship.

**What are the external curriculum influences and ties to other sub-publics?**

Consideration of external curriculum influence in the form of discussing related sub-publics is an attempt to remain true to public sphere thinking and the treatment of a program as a nested sub-public of both wider academic publics and the general public sphere. When a department or program adopts external curricula, it must do so in a two-tiered acceptance process. The first level of acceptance of external standards or curricula relates to the assessment of its alignment with the village’s raison d’être. The second acceptance occurs at the implementation level within individual courses. At this point, in a work environment with significant amounts of instructor autonomy, the adoption relies on instructor agency based on their personal beliefs regarding the importance or relevance of the curriculum in question.

This study supports the notion that curriculum debated within the public sphere gains attention and focus. Where this attention and focus leads to shared understanding regarding the adoption of external curriculum, the curriculum-related agency of
individual faculty members may be bolstered due to the group commitment (strong communicative act) made when debate leads to the choice by the group to include something at the program level. The insight for facilitators working from a public sphere perspective is to not avoid or down-play the existence and possible influence of external curricula on a program, but instead to facilitate the opportunity for discussion about external curricula within the public sphere. If the debate is meeting the standards of discourse established regarding critical and rational debate, faculty members will have the opportunity to problematize those areas of the external curricula that cause concern. Where concern is ideologically based on the mere existence of external standards or curricula, helping the group refocus on program goals and facilitating the development of background understanding where it is needed become primary tasks for the facilitator. In this study, ideological resistance to external influence was trumped by the fact that there was no external assessment of local practices for implementation and coverage. Therefore, curriculum was judged in relation to program goals not in relation to impacts on faculty freedom. That is to say, one has difficulty complaining about freedom restrictions when one has the choice to freely choose the enabling constraint. Had the external curricula been a requirement related to formal assessment of faculty members, the actual and perceived freedoms of faculty members may have been affected, possibly resulting in different issues being problematized by faculty members.

What traditions of curriculum discourse exist in the village?
There has been reference above to the levelling of actual and perceived freedoms within a curriculum village by-way-of foregrounding actual freedoms. Official curriculum responsibilities have an influence on the curriculum traditions of a department.
However, the official curriculum documentation and implementation requirements of an institution do not speak to the local traditions and customs that may unexpectedly limit or enable freedom. Foregrounding of local curriculum traditions and customs allows group members to assess the history and importance of those traditions on a periodic basis. I.e. do the patterns of curriculum discourse, development, and implementation serve the village’s raison d’etre? As an example, one curriculum tradition that existed within the BPEC community relating to induction was for a new regular faculty member to receive mentoring, guidance, and curriculum materials from an instructor who previously taught a course. Part of this mentorship typically involved the passing of materials from the last time the course was taught. During pre-project interviews it became clear that this tradition, which on the surface creates an open and welcoming environment, also had the unintended consequence of imbuing curriculum documents and past teaching methods with more authority than they may have deserved. New instructors, who may have arrived with significant curriculum-related agency based on their past experience, were not obligated to teach a course the way it had been taught before. However, in the absence of permission to change, the instructional and assessment methods that were inherited carried a weight of obligation that impacted their perceived freedom.

There are many curriculum traditions that may affect perceived freedom and ultimately faculty-member curriculum-related agency within a village. Common exams, blind marking, team-teaching, curriculum sharing, review of course outlines, standard outline formats, and unwritten unofficial academic standards are all examples of curriculum and pedagogy traditions that have interpersonal dimensions which may
result in perceived limitations to freedom and faculty agency. Not all traditions and standards need be brought to the fore in every discussion; however, this study showed that unwritten curriculum traditions may be more powerful than written curriculum guidelines when it comes to influencing faculty member behaviour. A facilitator who can create space for the discussion of curriculum traditions and allow for problematization of issues within the group is simultaneously addressing the background knowledge and perceived freedom concerns relating to faculty agency. Opportunity for problematization allows the group to reaffirm those curriculum traditions that have historical and practical significance to the members and demystify those traditions that took on meanings never intended.

**Villager Considerations: Unlocking Agentic Potential**

The agency dimensions provided by Alexander (2005) and used throughout this study provide a useful framework for facilitators considering whether or not individual faculty members experience communicative freedom within a group, whether they have sufficient background knowledge to participate, and how their personal beliefs about learning and knowledge may colour their perspective during curriculum discussions. At the outset of a curriculum development process gaps in faculty member curriculum understanding first require identification of what constitutes the pre-requisite background knowledge for involvement in curriculum-related discussions within the department. As a curriculum development process progresses and individuals are provided with resources and opportunities to ameliorate personal curriculum knowledge gaps, individual member’s perceptions of their communicative and curriculum freedoms come into focus for facilitators interested in fostering the agentic potential of faculty
members. Finally, as public sphere dialogue around curriculum issues unfolds, individual’s beliefs about learning, knowledge, and intellectual property may be ascertainable by a facilitator, giving him or her insight into the sources of strong consensus and conflict that may occur during discussions. Recommendations for facilitators regarding assessing and addressing necessary background knowledge, ascertaining perceptions of curriculum freedom, and exploring personal beliefs are discussed in more detail below.

**What constitutes the pre-requisite background knowledge for involvement in curriculum discussions?**

Within the Bachelor of Physical Education and Coaching (BPEC) curriculum studied in this program, graduating requirements, individual curriculum guidelines (course outlines), Douglas College Academic (DCAS) requirements, Sport Science Signature (SSS) requirements, and articulation agreements are all publicly available to department members. The history of program development, including the original degree proposal is also publicly available for any who want to read it. In spite of the availability of information, newer faculty (less than 4 years experience) were not fully versed in the curriculum requirements of the program across all four years and/or versed in the meta-curricular items (DCAS and SSS). As a result, the assumption made before the project, that faculty would be ready to discuss curriculum items on day one of the project was deemed wrong after the first interviews. In response, an education plan was instituted on day one that reviewed program history, the DCAS, and SSS. Not surprisingly, the assumption that shared understanding existed around terminology used within the department around instructional and assessment methods was also
wrong and more discussion and planning was undertaken than originally planned in this area as well.

The language of instruction and assessment, the language of the DCAS and SSS, and the history of the program were all necessary background components that could have been discussed prior to intensive mapping phase. By providing a knowledge framework at the outset of the project that addressed areas that were to be discussed, faculty members would have had a conscious opportunity to assess their understanding of terms and concepts and do some of the necessary preparatory work needed before delving into debate. If remaining true to public sphere ideals and a participatory project, debate about inclusion or exclusion of elements of a meta-curriculum cannot be undertaken before shared knowledge of the elements and the overall program is achieved. In hindsight, it is clear that the development of background knowledge could have occurred in short but focused pre-mapping sessions. The following example of a process that could have been used in this project is an expanded version of the one I recorded during a post-project interview when a faculty member asked me: “What would I do differently?” The assumption made in the following model, which is based on the feedback from faculty members, is that time for rumination and discussion was too short in the project. A longer lead time with short focused sessions would have been desirable before the intensive mapping period:

**Suggested process for levelling necessary background knowledge of participants:**

1. At the initial faculty meeting (4-6 months before intensive mapping) establish the broad program goals (its raison d’être) with group members and begin the discussion of characteristics of the ideal graduate.
2. Four to six months before intensive mapping, provide a knowledge framework of the program with identifiable internal and external curriculum influences, requirements and commitments previously made by program developers. These are not presented as fixed, but for information to help faculty members orient their own knowledge and what they may need to explore further. Additionally, a program history is of value when curriculum choices that are now deemed to be inherited were originally based on meeting program goals (see Appendix F for a table of contents from the overview documents from this project).

3. At subsequent meetings (prior to the intensive period) undertake the following discussions being sure to always connect discussions back to the knowledge framework and goals of the program:
   
   a. Inventory of instructional methods used throughout the department.

   b. Inventory of assessment methods used throughout the department.

   c. Overview of program structure, entrance, and grad. requirements.

   d. Overview of any meta-curriculum competencies to be mapped.

4. Following each discussion, an iteration of new information (communicative acts) should be circulated back to group members and validated at future meetings in order for shared understanding of terminology and methods to evolve. Using this process, time exists for errors and corrections to be addressed before curriculum surveys are completed during and after an intensive phase.
5. Engage in intensive mapping in a group setting so discussion of emergent items can be addressed as curriculum information is collected (surveys were completed in this project).

Remembering that not all faculty members need the same level of development in relation to their background instructional, assessment, and curriculum knowledge, The above process allows time for those that need extra support to further investigate specific topics or engage with other faculty members and/or curriculum documents. Without addressing differences in background knowledge relating to the curriculum items of importance, public sphere conditions resulting in strong communicative acts will be at risk due to the limitations on participation by community members who simply do not have enough information to contribute.

**What is the relationship between perceived and actual freedoms?**

As the mapping process begins, the actual curriculum freedoms of a group should be identified. For example: Are the program graduating requirements open for discussion? What are the curriculum relationships that bind us from the outside (e.g. articulation agreements, professional agreements/standards, institutional agreements…)? What freedoms do faculty have within a course as understood by the group? The discussion of these actual freedoms in a program frame the public sphere dimensions and limit the range of possible items for problematization within the group. By determining what is immediately controllable, and what may be influenced, but not directly controlled, a hierarchy of potential actions emerges that can be measured against one’s pre-conceived notions of freedom. In a program, such as the BPEC degree, wherein curriculum sharing is the norm and new faculty members inherit a
course pack, text and notes from previous instructors, they may not realize that they do not have to teach to that particular course pack, text and notes. A gesture of support may be perceived as restrictive to freedom if the freedom to change it is not part of the original discussion between faculty members. By fostering a discussion of these items during curriculum development, the facilitator helps establish the reference points for that which is in our control and that which is not. The image in Figure 26 below was provided to faculty members as part of their program history documentation and discussed during the first day of mapping.
To see the external requirements next to our chosen commitments was recognized by at least one faculty member as a powerful insight. It was the first time this individual had a frame of reference for separating the various curriculum commitments made by the department. During the reflective interview she stated: “I thought it was interesting defining of external pressures on the curriculum and then the - I forget the wording but the more informal kind of pressures that you might feel to standards that are internal to us and our own kind of teaching. I had known that it was there but I hadn’t really thought about it in kind of those terms (Interview 21:11)” Explicit
understanding of the limits of one’s curriculum freedoms requires discussion if perceived freedoms need to be raised to the level of actual freedoms. Only with freedom (both perceived and actual) can an individual bring beliefs and understanding together in the form of curriculum action that represents strong agency according to Alexander’s (2005) theory of human agency.

What beliefs are held about learning, curriculum and intellectual property?

Following the agency framework established for understanding individual needs, thoughts, and actions within the public sphere, we have discussed necessary knowledge, explored the need to be explicit about freedoms to align perception and reality, and we now turn to the importance of attending to participant beliefs about learning, curriculum and intellectual property. Beliefs about how students learn will begin to emerge during discussions around instructional and assessment methods with faculty members. Without revisiting fidelity orientations versus enactment orientations to curriculum founded on internal versus external constructions of reality, it is safe to conclude that where these two orientations co-exist in a curriculum village, attention to the presentation of material by the facilitator must take into account the range of underlying orientations to curriculum implementation. While discussing the merits and implementation aspects of meta-curriculum, disciplinary, professional, or other normative standards may be of concern to those holding external views of reality and fidelity orientations. In contrast, experiential opportunities and reflective process may be of concern to those holding internal views of reality. The curriculum facilitator may need to withhold one’s own view in order to address the concerns of individual members and make links between the personally held views of faculty members. For example,
experiential views of education are not incompatible with meeting widely held standards for professions or disciplines. Those standards may need to be more public and transparent so faculty can facilitate student development in ways they feel meet both their personal beliefs about how learning occurs, while also upholding the standard in question. Implicit in this position is the belief that a competency may be learned and demonstrated multiple ways. For some this belief itself may be problematized, which affords the group an opportunity to bring their beliefs about learning and knowledge into the foreground for debate.

During the mapping process, the communal construction of a curriculum representation may prove more challenging to some faculty members than others due to their orientation to knowledge as external, pre-existing and/or assumed. For those individuals who hold external views of knowledge and external legitimization needs, expert knowledge from outside the local community may be a valuable motivator a facilitator can rely upon as needed. For those individuals with social construction orientations, the sharing of practices and search for locally shared understanding may hold intrinsic value and thereby be a key source of motivation for engagement in the process. In the longer term, the congruency between individual beliefs and those embedded in the rationale for mapping may create a cognitive disruption that leads to reconsideration of one’s beliefs, however, in the shorter term, a facilitator is more likely in a position of managing multiple beliefs and individual engagement motivations at once. That is to say, the immediate need of the facilitator is not to consciously attempt to reshape members’ beliefs, but instead, to foster the constructive and healthy discourse that allows individuals to bring their beliefs forward and into contact with
other’s beliefs. To foster this level of engagement and discourse, it is helpful for the facilitator to recognize whether an individual responds to appeals to authority versus appeals to community. Insights such as these are early indicators of underlying motivations and legitimization needs that must be validated for the individual through the facilitation process.

In addition to attending to the legitimization concerns of participants in order to assess their beliefs and moral alignments, individual’s perceptions of intellectual property are an important consideration that relates to curriculum and beliefs about knowledge. To understand the importance of beliefs about ‘ownership of knowledge’ it is helpful to revisit the construct of curriculum stewards. A curriculum steward in the public sphere is an individual who is responsible as a leader of a curriculum space (course, competency, or theme) and oversees experiences relating to faculty and students who are engaged in that curriculum space. The steward of a curriculum may officially be a coordinator, or unofficially, be the person who is deemed the leader on a course by his or her peers. Publics and stewardship are conceptually well aligned due to their grounding notions of sharing and shared space. In contrast, ownership of ideas and curriculum spaces is more easily aligned with private or economic sphere constructs. In order for open and honest public sphere conditions to be achieved, private sphere and intellectual property notions may need to be challenged if members are unwilling to allow insight into their curriculum and pedagogical practices in relation to program goals. In order to assess an individual’s beliefs, it may be helpful to consider the community as a whole and individual member’s comfort or discomfort with sharing practices and local versus expert knowledge.
Individual dispositions towards stewardship or ownership of ideas are situated within the wider curriculum village with its own set of curriculum traditions. Answers to the following questions may contribute to a facilitator’s understanding of current curriculum traditions and overall views about intellectual property: Do new faculty members receive curriculum from existing faculty members? Do courses with multiple sections have instructor meetings wherein content, pedagogy and assessment are co-constructed? When multiple sections of a course exist, are there identifiable curriculum stewards that lead development? By gaining an understanding of the curriculum practices of the whole, the facilitator gains context for understanding individual member’s comfort with stewardship versus ownership construct. Where ownership and protective thinking prevails, challenges to the notion that ideas are owned may cause the cognitive disruption necessary for faculty members to reconsider their beliefs. These challenges may already be occurring within a curriculum dialogue, however, from the perspective of the facilitator utilizing pubic sphere thinking, the foregrounding of the choice between recognizing curriculum responsibilities as stewardship versus ownership becomes an explicit responsibility of being the steward of public sphere conditions.

**Curriculum Representation and Curriculum Mapping**

Curriculum maps can be seen as a form of curriculum representation capturing the intentions and goals of those involved in a program at a particular point in time. There are two particular risks to meaningful representation and public sphere thinking that must be addressed by facilitators. The first risk is that curriculum maps or curriculum representations are seen as authoritative beyond their actual communicative
power and may therefore become resistant to revision. The second risk of curriculum representation is that leveraging of curriculum ideas in the form of brief competency descriptions or pedagogical labels may dislocate the curriculum discussion from the lived reality of faculty and students. In addition to these two risks associated with curriculum representation in general, the following four additional considerations for facilitators interested in using curriculum mapping as a development tool are also presented below:

1. Mapping can help establish the minimum level of shared understanding needed for group commitments to curriculum goals.

2. Mapping is an attractor for problematizing curriculum issues.

3. Mapping is a curriculum artefact with the ability to create continuity between curriculum discussions.

4. Curriculum mapping is subject to analogic instrumental considerations.

Public sphere thinking dictates that curriculum representations are temporary.

Habermas’ view of knowledge relies on socially constructed ideas debated openly, validated normatively, and open to future revision based on new information and debate. Curriculum developed in this light must also be socially constructed, debatable, validated against normative comparisons, and open to revisions. Curriculum maps and other curriculum documents created during curriculum development can therefore only be temporary repositories of existing knowledge and thought regarding what should be included in a program or course. As new faculty join a program and new information is problematized within a group, the maps must be open to regular revision. As a guardian
of public sphere thinking, facilitators and curriculum leaders are responsible for presenting previously created curriculum artefacts as revisable. Where program revision may take years to implement, as is the case in many undergraduate programs, the facilitator may need to present timelines for re-opening debate based on administrative realities. The fact that members of a department know that a curriculum will be revisited contributes to a sense of control over the destiny of a program resulting in contributions to faculty member agency and engagement in public sphere debate.

**The risk and reward of curriculum leverage.**

Mapping requires collecting curriculum data and representing it throughout a program of study. In this study, a failure to validate the curriculum data that became representative on the maps was a flaw in the facilitation process that can be avoided using a variety of techniques. Small errors in understanding lead to large errors in representation when data is mapped. If decisions are made based on flawed data, the error is effectively leveraged to the point wherein faculty members begin to lose faith in the validity of the representation. The reward of curriculum reduction and leveraging of data into visual representation is that when shared understanding is represented in the map, and the data is deemed trustworthy, subsequent curriculum communication is accelerated due to a shared linguistic register and field of meaning that has been developed around local curriculum and pedagogy terminology.

In order to minimize the risks of curriculum reduction and representation and maximize the rewards, the data collected during initial surveys, interviews, observations, or focus groups should be member-checked for understanding. Where flaws are found the process of member-checking can be used to revise the data and revisit
misunderstandings with individuals or in a group as necessary. In this study, the simplest way to member-check would have been to go through the Currickit reports for individual competencies that listed courses for each sophistication level (outcome levels I, II, & III) and create discussion groups. Through discourse, shared understanding of what “counted” at each level of sophistication would emerge and the community would slowly develop a repository of examples for each competency and sophistication level that was locally derived. Only through a discursive curriculum data collection process will reduction lead to a trusted curriculum representation of actual group intentions and experiences.

**Mapping can help establish the minimum level of shared understanding needed for group commitments to curriculum goals.**

One of mapping’s many purposes can be to help establish the minimum threshold of conversation necessary for individuals to become contributing curriculum village members. Maps in this study identified program structure, student pathways, meta-curriculum competencies, disciplinary or subject groupings, faculty member interests, and the immediate surrounding course by course network of influence between courses. Understanding all facets of the program is not a requirement to contribute to public sphere style curriculum discourse, however, the more information access a person has, the greater the potential for meaningful contribution. By establishing the desired elements of a curriculum map, the community is essentially establishing the minimum individual knowledge necessary for community members to contribute to curriculum discussions at the program level.
In this study, it was clear that the creation of maps and the discussion around the mapping process was an induction opportunity for new faculty members as discussed in the results of Chapter 5. What was also clear was that not all members of the department needed to be present for the early phases of curriculum induction, which can be defined as establishing the necessary background knowledge to engage in informed public sphere curriculum debate. One suggestion for facilitation that emerges based on the background knowledge that surrounds map components is to hold pre-mapping sessions with faculty members who are unfamiliar with any of the following: overall program structure including pre-requisite sequences and graduating requirements, meta-curriculum components that are dispersed throughout a program, disciplinary and subject area groupings of courses including the logic as to their inclusion or location in the program requirements. Remembering the characteristics of public sphere discourse, these sessions may be open to all faculty members, however, it will be the role of the facilitator to help those with strong communicative power, due to high pre-existing knowledge levels, not abuse that power by moving too quickly to consensus or conclusion until those developing the necessary background knowledge gain their voice.

**Mapping is an attractor for problematizing curriculum issues.**

This study showed that mapping using public sphere thinking will bring forth unexpected curriculum issues. Qualitative inquiry and the choice of written communication as the dominant area of further investigation by the department were two curriculum issues problematized by group members that led to group commitments. Facilitators working from public sphere perspectives need to be open to the generative
direction of the curriculum discussion. While not all paths can be followed at all times, the sensitive facilitator will allow for problematization of unforeseen issues and help the group set a course for discussing those issues either immediately, when time permits, or at some specific point in the future. If the public sphere is to believe it has influence over the curriculum and thereby maintain its agentic potential and tendencies, the group must trust that the ‘parking lots’ that new issues are placed in are not actually disguised ‘grave yards’.

A significant lesson of this project in relation to the scale of mapping and the potential for problematization is that dealing with all areas of curriculum across all the spaces of a program is too much for a single mapping project. Mapping acts as a focuser of attention. By more selectively dealing with a smaller number of competencies at any given time, the process would have more likely reached the shared understanding and consensus needed for more powerful curriculum goals to emerge in the form of group commitments. As it stood, this project resulted in the recommendation by faculty members that we narrow our focus onto ‘written communication’ while we refine the process for curriculum reduction and representation that is needed to create valid data in the eyes of faculty members. When it came to the inclusion of DCAS and SSS competencies in this project some would have been good, but more was not necessarily better.

**Mapping is a curriculum artefact with the ability to create continuity between curriculum discussions.**

The reality of departmental curriculum work for many faculty members is that curriculum development or re-development is only one of the many responsibilities of
faculty. At any given time, faculty member responsibilities may include teaching, administering, committee work, advising, professional development and research. As a result, a significant difficulty of creating public sphere conditions around curriculum discussions is carrying forward new understanding from one meeting or set of meetings to another. Mapping as a representation of curriculum and intentions provides an opportunity to pause and restart curriculum conversations more readily. In this project, curriculum maps were created in May and June and program revision using maps was revisited in December. In December, the familiarity with the map allowed faculty members to assess a set of potential program changes immediately without needing to revisit the original program structure. The ability of mapping to carry the conversation forward demonstrated that the program level background knowledge developed by new faculty members in May was lasting and that the visual form of curriculum aided in recall (see Appendix L).

The facilitator’s responsibility with regard to creating continuity between curriculum development sessions is to ‘bookmark’ open discussions and ‘retire’ issues where consensus has been reached or public sphere interest has waned. A curriculum map has the potential to be the place where these actions are recorded and reviewed. In this regard, a program level map may become a central document of curriculum level discourse in a curriculum village. The analogy to geographical mapping is strong at this point and the familiarity of visual forms of representing information may be the reason that maps as opposed to text documents may be more powerful for some members of a department when it comes to the pausing and continuation of curriculum discussions.
Curriculum mapping is subject to analogic instrumental considerations.

Picking up on the analogic relationship between curriculum maps and electronic topographical and sociographic maps such as Google Earth®, curriculum mapping appears to be subject to an “expectation transfer” between technologies. That is to say, user expectations developed using information software for other forms of information management migrates with the metaphoric analogy to the technology used in education. Geo-location no longer requires sextants and clocks, in the same way that post-secondary education is moving away from textbooks and lectures. Explorers now have GPS, satellite imagery, and Google Earth®. Students now have social media and online learning. Working within a digital and social media context, faculty members appear to hold quality expectations with regard to information management and online tools. The evidence of this ‘expectation transfer’ came at two points in the project. First, faculty members expressed disappointment at the user interface and antiquated feel of the online curriculum survey software used by Currickit. This software used a traditional form based survey that required scrolling and clicking “save” at the bottom of the page. It was no more than 2 years old, however, faculty commented on the frustration with the features and lack of automatic saving of data during its use. None of the faculty had ever used online curriculum survey software similar to this before leading to the conclusion that these user expectations are transferred from their broader experience with information technology. The second example of ‘expectation transfer’ occurred when faculty members displayed excitement at the use of the visual maps for representing program elements as opposed to the Currickit reports and excel graphs. This idea of point and click access to program, competency, and course information all on one screen in an organized and familiar format struck a chord with faculty members.
When the second generation of maps (Appendix L) was introduced in December without fan fair, critique or question, the initial excitement in May was confirmed by their ease of use for facilitating discussion.

The implications of technology expectation transfer for facilitators and curriculum developers are significant. To begin with, curriculum developers are unlikely to be programming and user interface experts, therefore, where possible, using software that is widely available and familiar to faculty members may be more desirable than using software that is either custom or difficult to use. Another implication relates to the idea that curriculum representation in digital forms is in its infancy compared to how we have transformed our topographical worlds into both physical and public sphere conduits using social media and powerful mapping and database software. From this perspective, the future of curriculum mapping may include social spaces for debate that parallel the curriculum construction in digital space. That is to say that social media, tagging, searching and mapping of curriculum representations may converge in the future in digital space to create forms of curriculum mapping that more closely resemble forms of cultural mapping and discourse that overlay digital geographic maps throughout online communities (publics). Curriculum mapping, like curriculum itself will have a normative bias in this regard that will come to effect the forms of mapping and maps deemed most generative over time. Curriculum representation in general, like other forms of information representation, is caught in a technological and social current as evidenced by faculty member expectations of curriculum representation.
Facilitator Considerations

In the world according to Habermas, a facilitator of public sphere conditions and critical rational debate is an unnecessary consideration. The political and economic spheres are concerned with roles and responsibilities, not the public sphere. The public sphere is where the current debates of importance emerge, lead to new understanding, and ultimately come to influence the political and economic spheres through the power of their communicative acts. All those involved in public sphere debate according to this version of a grand public would be in the same essentialist struggle for truth that leads to our innate need to continually adjust and re-adjust our beliefs in response to new information and force of better argument. In an academic workplace, this study has presented an alternative to distinct views of the public and economic lifeworlds by suggesting that public sphere thinking can occur in workplace settings wherein decision-making authority is maintained by the group. A department or program often maintains this local control over decision-making. From this perspective, the question for curriculum development facilitators, becomes not whether public sphere thinking can be applied to academic workplaces, but instead, how might one facilitate the development of public sphere conditions. Three insights emerged during this study relating to this question that are further described below. To begin with, the curriculum facilitator becomes the steward of public sphere conditions. Secondly, critical rational debate is an ideal and emotion during debate is normal, therefore, caring and sensitive facilitation is required. Finally, attention to the real world considerations of reaching shared understanding and/or consensus require adaptations to public sphere theory.
**Stewardship of public sphere conditions.**

The facilitator occupies many roles during curriculum development and review processes. In this study, technical expert, scheduler, program historian, and curriculum expert were all roles occupied by me during the facilitation of the mapping project. In hindsight, however, these roles were all servant roles to the role of ‘steward of public sphere conditions’. As steward of public sphere thinking, I was responsible for establishing conditions that rewarded critical rational debate while trying to reduce the use of individual’s position or authority during discourse. Additionally, a supportive role emerged related to helping those who initially self-limited their contributions, due to a lack of background knowledge or perceived freedom, contribute more freely over time.

The *rules of engagement* during faculty discussion vary from circumstance to circumstance and include concerns such as raising hands to speak and an unofficial historical speaking order. As steward of the public sphere conditions, one of my responsibilities was to assess existing communication norms and determine if they support or undermine public sphere ideals. The facilitator has the power to change the patterns of discourse for better or worse. ‘Better’, with respect to public sphere thinking, is quantifiably determined by the level of inclusion, contribution, and critical rational debate amongst group members. To be too prescriptive about how to establish and change established patterns with a group would be to disregard the local characteristics of curriculum debate; however, recognition of the stewardship role and the nature of the facilitator’s power is a starting point for critical self-reflection by facilitators into their contribution to public sphere conditions.
Public sphere thinking does not end at the fostering of rich rational debate, but continues through the delivery of powerful communicative acts by the group. Whether the facilitator is responsible for those acts, as was the case in the technological creation of curriculum maps in this project, or whether other members of the group are responsible for the communicative acts, the facilitator’s role is to see those communicative acts through their validation by community members. In this study, the communicative acts were the *Curriculum Mapping Research Reports to Faculty Members 1, 2, & 3* (see Appendices Appendix D, Appendix G & Appendix J) and the maps and reports created for discussion. In the grand public sphere, interest and attention to ideas waxes and wanes, which is not significantly different from the issues that surround curriculum discussions within a department. The risk to workplace based settings when strong communicative acts are not captured in curriculum representation or communication back to the community is that future commitment to public sphere style discourse, which requires patience and investment, may be undermined by feelings that agency is better manifest in individual rather than group ways.

**Caring and sensitive facilitation.**

A second emergent theme related to facilitation can be summarized as the need for caring and sensitive facilitation. Work places are not only characterized by their products and working conditions, but also by their interpersonal relationships. Schwier et. al. (2007) identified interpersonal commitments as one of the domains of assessment faculty members use for determining whether or not a curriculum option is morally coherent with their personal beliefs. According to Schweir et. al. when alignment between interpersonal needs and personal beliefs relating to a curriculum option occurs
the tension around adoption of the option is reduced for the individual. The presence of interpersonal commitment is not entirely problematic to Habermassian theory since he felt that public sphere discourse was not only a progressive search for truth and public attention, but also, a form of socialization and enculturation. Recognizing this dual role of public sphere discourse puts the facilitator in the position of pushing critical rational debate, while recognizing that not all members of a group see eye-to-eye on topics. What is challenging about public sphere theory in a workplace setting is that individuals may reserve their true feelings about a curriculum option based on their interpersonal commitment or commitment to the group as a whole. In this regard, it is arguable that rational critical discourse may be compromised by an overly cohesive group. Work place settings may require the facilitator to consider whether interpersonal commitments are overshadowing rich debate. In this study, faculty members reported their strongest commitments to disciplinary and professional concerns, with interpersonal commitments third and institutional commitments last of the four.

When disagreement occurred around an idea, which was the case with the Sport Science Signature items of physical literacy and holistic instruction, the disagreement was acknowledged to be centred on the ideas not rooted within the individuals debating the ideas. When agreement could not be reached an assessment was made by me as facilitator as to the immediate importance of the problem to those who were discussing it. When the topic was not deemed their most pressing priority, permission was received to move on. Recognizing that the opening and closing of discourse can represent judgement on an individual's value to the community, attempts were made to open and close the discussion in ways that validated both the problematization of issues for the
group, while also disassociating the ideas from the individual for scrutiny. The
dissociation of a controversial idea from the individual who raises it emerged as an
essential public sphere facilitation skill for attempting to protect interpersonal relations
while also supporting rational and critical debate.

Speaking to mapping specifically, as courses were mapped, there were moments
when either misunderstanding by a faculty member was evident, or what was thought to
be going on in a course was not. Mapping makes our work more transparent, which in
turn, makes us more vulnerable to the perceived judgement of others. Rejection of
mapping or similar processes may be a form of self-protection for some. Said differently,
it may simply be easier on the ego to avoid the scrutiny of others than to seek it. In this
study, the fear of having others scrutinize one's misunderstanding was evident when
faculty members unanimously decided not to grant each other administrator access to
the Currickit data. This action would have allowed them to view each course result and
see any reports they wanted on courses. There was simply too much potential
misinterpretation and judgement possible by doing this, especially since some
misunderstanding of initial terminology was demonstrated by faculty members in the
first attempt at the curriculum surveys. To address the issues of vulnerability and trust, I
chose to recognize with the group that curriculum is not inert and separate from us, it is
our work and constitutes part of our identity. Recognition took the form of
acknowledgement that none of us want to be ‘misread,’ and therefore, until we are all
confidently speaking the same instructional, assessment, and competency language,
their wishes to have only the facilitator create the reports was respected. In addition to
validating concerns, the role of a caring facilitator in this regard also included protection
of faculty members who demonstrated misunderstanding by not focusing attention on their misunderstanding in disproportionate ways. In the review of written communication reports developed on day four of the mapping, it was clear that there were two faculty members who had interpreted the competencies in very different ways than the rest of the group. In order to protect these individuals my comments focused on the fact that all the surveys were in need of some tweaking before the data represented shared understanding of terminology used throughout our program.

Caring and sensitive facilitation may be hard to plan for due to the unpredictable nature of emotions and the unidentifiable attachments and identity associated with curriculum concerns. In her review of literature on work place emotions Domagalski (1999), discusses the role of position in an organization on modelling emotions. In the case of attempting to create rational critical discourse, the facilitator is tasked with demonstrating the habits of mind (Bailen et. al, 1999) that are required by group members to keep emotions in check while engaging in a debate of ideas. Modelling will only go so far and facilitators are not flawless, nor should they be held out to be. When debate does falter due to heightened emotion, the facilitator must be ready to resort to direct communication to bring either an individual’s or a group’s attention to both the desired type of discourse and the intended purpose (shared goals) of the discussion.

Caring and sensitive communication attempts are not guaranteed to work, however, it is almost guaranteed that allowing communicative freedom will eventually raise sensitive issues within a group by-way-of problematization of issues that directly relate to another person’s curriculum. For educators, curriculum and pedagogical concerns form part of our identity and exposing ourselves for scrutiny in a public sphere
is risky business for some. Public sphere ideals and the theory of communicative acts assume shared values and commitments, however, workplace settings do not guarantee these characteristics. As a result, a steward of public sphere conditions must also demonstrate caring and sensitive facilitation that engenders the trust of participants and protects those who take social risks. In sum, caring and sensitive facilitation is needed in a workplace setting because interpersonal commitments and identity protection may trump the essential human trait of seeking knowledge through debate that Habermas relies on to justify the positivist tendencies of his public sphere theory.

**Real world considerations require adaptations to public sphere thinking.**

In the face of real world concerns such as time limitations, multiple world-views within one department, and external restraints on a program mandate, the consensus and shared understanding that is predictive of strong communicative acts may not be forthcoming. In cases where debate is ongoing, but decisions must be made, the facilitator is required to show leadership by both protecting the public sphere ideals and moving the process forward, albeit in a restrained form. To be very specific here, in order to avoid a mock democracy that results in a plebiscitary approval process, the facilitator must work to ensure the following conditions are met before moving to the democratic practice of voting. First, individuals included in the debate must have the necessary background knowledge needed to make informed contributions to curriculum issues at hand. In the case of curriculum mapping, this background knowledge included a complete program overview, instructional and assessment terminology, and competency terminology. Secondly, once an issue is problematized, the individuals in the discussion must be afforded the opportunity to contribute to the discussion. Only
then would a steward of public sphere ideals, faced with time pressure, move the group to the democratic process of voting. As a workplace based public, work conditions do not allow for endless debate on topics and/or for members of the public to simply “wait-out” the opposition. Workplace demands place the facilitator in a position of catalyst which can conflict with the role of stewarding public sphere conditions. Curriculum villages are long-term constructs and one suggestion that presents itself when a vote must be taken to move a group is to give a term limit to the decision. For example, curriculum often undergoes periodic review at regular intervals and commitment to review a topic again demonstrates the openness of the curriculum to future influence.

In addition to the temporal requirements of curriculum decision making that must be vetted by institutional governance structures, external curriculum requirements and program mandate may limit the scope of options available to an academic public. In these cases, it is the explicit role of the facilitator to help the group identify, name and work with these restraints in order to help align actual and perceived freedoms. Dealing with external freedoms may be less contentious than dealing with internal disagreement, however, they both represent necessary adaptations to public sphere ideals that if not dealt with can undermine the attempt to apply public sphere thinking to curriculum development process, such as mapping.

Facilitation Consideration Conclusion

This chapter has discussed a number of considerations that may contribute to the success of a facilitator attempting to employ public sphere thinking to curriculum development. By addressing the characteristics of the local curriculum village the facilitator gains insight into the shape of the village, the surrounding curriculum
influences, and the internal traditions that gave rise to current student experiences. Within the village, the facilitator is concerned with the individual background knowledge and beliefs held by its members. From a process perspective, the idea of curriculum becoming a strong communicative act by faculty members gives rise to questions regarding how to ensure that reality and representation align to take full advantage of the reduction of lived experience into the shared and concise terminology of maps. Finally, the reflective facilitator must be concerned with his or her own actions in order to demonstrate successful stewardship of public sphere conditions. In particular, caring and sensitive facilitation is a real world adjustment to bourgeois public sphere theory needed to engage faculty members in public sphere-style curriculum development.
Chapter 8: Conclusion

Only participants themselves can decide what is and what is not of common concern to them. However, there is no guarantee that all of them will agree. (Fraser, 1990, p. 71)

The thing that holds the group together is the tacit or explicit agreement to continue the conversation towards these aims, despite the limits and interruptions—because there is no definite destination at which to arrive. (Kemmis, 2006, p. 472)

Nancy Fraser’s and Stephen Kemmis’ comments on public sphere participation quoted above could easily be describing the inner-workings of a curriculum development discussion undertaken using public sphere thinking. Curriculum development facilitators working in post-secondary cross-disciplinary settings may find themselves in a space of little agreement, mixed beliefs, varied understandings of curriculum and pedagogy, and multiple epistemological and ontological worldviews. Such rich diversity is one of the desirable aims of a post-secondary education; therefore the challenge for curriculum developers utilizing a public sphere perspective is to respect diversity of views while working towards the shared outcomes perceived to be desirable for the group as a whole. The approach taken in this study to address curriculum complexity was to conduct an exploratory project utilizing curriculum mapping to investigate the relationship between curriculum mapping undertaken utilizing public sphere thinking and faculty member agency in relation to self-identified curriculum goals.
The use of participatory action research methodology (Kemmis and McTaggart, 2005), based on Habermassian theories of public spheres and communicative acts, allowed members of the study to derive their own measures of success for the project and direct its course as it progressed. The result was an identifiable relationship between curriculum mapping and faculty member agency in the form of tangible curriculum actions and reported impacts on individual’s background understanding related to the curriculum, perceived freedom levels regarding curriculum change, and impacts on beliefs relating to learning and knowledge. Perhaps most surprising was the fact that the impacts on faculty agency occurred in spite of the less than perfect curriculum maps produced in this exploratory project. That is to say, the process of mapping was valuable apart from the results produced in the form of maps. For example, the process brought to light for faculty members that qualitative inquiry and written communication were two areas of concern that they wanted to address in more detail in their professional development and curriculum considerations. Additionally, recommendations to change the program structure emerged during the discussions resulting in revisiting entrance, graduating, and progression requirements of the degree at the centre of the study.

The mapping results met some of faculty members’ expectations with regard to visual representation of curricula, however the underlying data were deemed to have been built on a slippery slope of semi-shared understanding. The concept of leveraging of student and faculty experience in the form of curriculum data emerged as a window into the importance of locally shared understanding of curriculum concepts. The rewards of reducing curriculum to maps, charts, and reports may be quick access to
points of interest, easy communication, and short-hand representation of program goals
and achievements; but the risks of leveraging and reduction are that mis-
understandings of concepts represented in a map are amplified during the process. This
leveraging of error can reach a point wherein the curriculum representation loses the
trust of the individuals whose lives it is meant to represent. A map in this regard is a
mirror onto a faculty member’s lifeworld and if the reflection does not look like that
person’s experience, then the mirror loses its primary utility of allowing insight into
oneself. In this regard, had this project restricted itself to assessing success based on a
pre-determined utility measure connected to the production of the maps themselves, it
would have suffered the same fate as Sumsion’s and Goodfellow’s (2004) study and
been declared only a marginal success. That is to say, a quantitative accounting of
competency, instructional, or assessment practices may be of limited utility to faculty
members as a stand alone representation of curriculum. What turned out to be of
primary utility was the creation of the space and time for facilitated rational debate
around curriculum concerns. Within this space, new curriculum issues were
problematized by the group and discussion focused on emergent areas of primary
concern.

In addition to the findings of this study relating faculty member agency, mapping
process, and mapping products, this study produced a series of emergent insights
related to the use of public sphere thinking (Habermas, 1962, 1989) in curriculum
development and representation, as well as, in relation to the use of a metaphorical and
analogic thinking to understand groups of faculty members bound by program interests
as a vested curriculum village. Habermas’ theory of public spheres as applied to an
academic public with decision making authority over their curriculum choices, aligns conveniently with Alexander’s (2005) human agency theory, helping to explain how individual agency may require understanding and how group agency (communicative acts) requires shared understanding. Without shared understanding amongst group members, it is difficult for strong communicative acts in the form of curriculum representations (maps) to be created. This finding supports the inter-subjective and social constructivist nature of a shared reality within a curriculum village.

The adoption of public sphere thinking during the facilitation of this project was a direct result of adopting a participatory action research methodology. The openness of the methodology led to a number of insights that may have otherwise been overlooked. One emergent line of thinking in this study related to the idea of curriculum villages being grounded in a mapped program landscape complete with its stewards, waypoints, pathways, and rituals. The language of curriculum and curriculum development in this regard had its own metaphorical past that was deeply tied to the super-metaphor relating travel, place, and learning. The long-standing debates about what occurs on that journey amidst internal versus external constructions of reality were not resolved, but were instead identified as a set of co-existing diverse world-views that are forced into contact during curriculum discourse constructed around public sphere ideals. The image of a curriculum village built on a program landscape also gave rise to investigating the public and private nature of the curriculum customs within the community as a whole. Only within a local curriculum context (village) do beliefs relating to the stewardship versus ownership of curriculum become meaningful. These and other analogic extensions of the village metaphor provide a facilitator with a framework for assessing
the nature and practices of curriculum development within a community of interest. The framework of a curriculum village also forces critical review of public sphere ideals applied to workplace based settings. Facilitators attempting to foster rich critical rational debate must do so using caring and sensitive facilitation and attention to interpersonal considerations within the group. When done properly a successful facilitator of curriculum representation can expect to witness increases in faculty member curriculum-related agency by-way-of discourse that is characterized by the bracketing of administrative power by individuals, communicative freedom of members, and the ability of members to problematize previously unconsidered curriculum issues. When this discourse results in shared understanding and consensus and the forms of representation can capture the intentions of the group in meaningful ways, the resultant curriculum documents, such as maps, are imbued with the communicative power of the group.

In conclusion, it is important to remember that, as a exploratory project, this study was destined to be incomplete and meant to guide future attempts at mapping. As it turns out, curriculum mapping and curriculum representation born from powerful communicative acts may always be incomplete due to the progressive nature of critical rational discourse. A well-constructed curriculum representation born from public sphere style debate immediately becomes an artefact of the moment. To be true to the progressive principles of public sphere conditions, curriculum representations must remain open to new problematizations of curriculum that will emerge over time. Curriculum villages are alive with real people (students, faculty, staff) living out real experiences on a daily basis. As a nested public that represents both local intentions
and legitimization concerns of broader publics, engaged faculty will be constantly updating and shifting their curriculum and pedagogy in response to broader public, disciplinary, institutional, or professional concerns. As these shifts occur, changes in the curriculum landscape may occur that require the group to periodically reorient themselves. Mapping is only one part of the broad curriculum development process and represents only one form of curriculum representation. Regardless of the form, however, the direct suggestion of this study is that through a participatory process of localization, caring facilitation, and critical rational debate, the agency of faculty members involved in a curriculum representation project can be positively affected when public sphere thinking and public sphere conditions are hallmarks of the process.


Appendices
### Appendix ADouglas College Academic Signature Framework

<table>
<thead>
<tr>
<th>Thematic category</th>
<th>Associated core competencies</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inquiry</td>
<td>Information literacy</td>
<td>Students will become independent learners who demonstrate the ability to locate, manipulate, absorb, and add value to information; they will combine fluency in information retrieval techniques with sound investigative methods, critical discernment, and ethical use of intellectual property.</td>
</tr>
<tr>
<td></td>
<td>Technological literacy</td>
<td>Students will use evolving computer technology to retrieve, store, process, transmit, and create a variety of types of information.</td>
</tr>
<tr>
<td>Communication</td>
<td>Spoken communication</td>
<td>Students will demonstrate fluency in speaking, listening, and working with others, including communicating in a professional manner.</td>
</tr>
<tr>
<td></td>
<td>Written communication</td>
<td>Students will demonstrate the ability to read efficiently, sensitively, and critically and to express their ideas and feelings in writing in order to inform or persuade an audience.</td>
</tr>
<tr>
<td></td>
<td>Intercultural communication</td>
<td>Students will show awareness of their own cultural identities and those of others. They will develop the ability to communicate effectively in a multicultural environment in order to promote harmonious intercultural relations.</td>
</tr>
<tr>
<td>Reasoning</td>
<td>Quantitative reasoning</td>
<td>Students will demonstrate an awareness of and proficiency with various computational skills that will allow them to effectively interpret and use quantitative information.</td>
</tr>
<tr>
<td></td>
<td>Analytical reasoning</td>
<td>Students will develop the ability to think critically about information, issues, or problems, and then respond with effective arguments or strategies.</td>
</tr>
<tr>
<td>Citizenship</td>
<td>Teamwork</td>
<td>Students will demonstrate the ability to operate effectively in supportive and leadership roles when working collaboratively.</td>
</tr>
<tr>
<td></td>
<td>Social Responsibility</td>
<td>Students will demonstrate the capacity for thoughtful and responsible participation in political, economic, cultural, and social life.</td>
</tr>
</tbody>
</table>

Table 1. Douglas College academic signature core competency components (Douglas College, 2007).
As the Academic Signature process evolved, broad themes were continually refined by the Douglas College’s Academic Signature Steering Committee in order to provide three levels of learning outcomes for each core competency. The learning outcomes for the core competency of information literacy are described in Table 2.

<table>
<thead>
<tr>
<th>Information Literacy Learning outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level I</strong></td>
</tr>
<tr>
<td>Recognize when information is needed to solve a problem and create a simple but effective research plan to identify and locate relevant sources. Demonstrate an understanding of plagiarism and academic integrity. Cite references appropriately.</td>
</tr>
<tr>
<td><strong>Level II</strong></td>
</tr>
<tr>
<td>Compare and contrast the purpose, scope, and relevance of a wide variety of information sources. Employ complex research techniques, critically appraise the usefulness, currency, and objectivity of information retrieved, and modify the research plan accordingly.</td>
</tr>
<tr>
<td><strong>Level III</strong></td>
</tr>
<tr>
<td>Propose and plan research projects using an extensive range of general and discipline-specific information sources. Develop surveys, experiments, and/or interviews to collect original data, and ethically manage information collected. (Douglas College, 2007, p. 5)</td>
</tr>
</tbody>
</table>

Table 2. Learning outcome levels of achievement for Douglas College information literacy core competency.
Appendix B: Informed Consent Letter

Informed consent
Principal investigator: Brian Storey, PhD (c), Simon Fraser University
Faculty of Education, Curriculum Theory and Implementation

Date:

Dear Sport Science Faculty Member,

You are being invited to participate in the Undergraduate Curriculum Mapping and Faculty Agency study being conducted by Brian Storey, Principal Investigator and doctoral student in the Faculty of Education under the auspices of Simon Fraser University. The Faculty Supervisor of this study is Dr. Stephen Smith.

The study purpose is to investigate the efficacy and impacts of a facilitated curriculum mapping process for faculty members involved in teaching the Bachelor of Physical Education and Coaching (BPEC) at Douglas College in New Westminster, British Columbia. The curriculum mapping process itself will attempt to link courses and cross-curricular themes and competencies throughout the 4-year degree using software to organize and link the information on competency, course, and program levels. The potential benefits of participation include an increased understanding of the inter-relatedness of the BPEC curriculum and learning new computer software that will reduce redundancy in your work and increase transparency in curriculum decision making. Table 1 describes the phases of the process, proposed timeline and the estimated time commitments you are being asked to make towards the project. All interviews and focus group meetings will take place at Douglas College at mutually agreed upon times.

<table>
<thead>
<tr>
<th>Project phase</th>
<th>Calendar timeline</th>
<th>Estimated time involved (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Pre-project in-depth interview</td>
<td>Jan</td>
<td>.75</td>
</tr>
<tr>
<td>2 Focus group on desired mapping process and outcomes</td>
<td>Jan. or Feb.</td>
<td>1</td>
</tr>
<tr>
<td>3 Group curriculum mapping sessions</td>
<td>Mar. - May</td>
<td>3</td>
</tr>
<tr>
<td>4 Individual mapping work related to courses</td>
<td>Mar. - May</td>
<td>2-5</td>
</tr>
<tr>
<td>5 Post-project reflective interview</td>
<td>May or Jun.</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 1: Project phase and estimated time commitments.
The data in the study will be collected via tape-recorder in the pre- and post-study interviews (items 1 and 5 in Table 1) and by video in the focus group and curriculum mapping group sessions (items 2 and 3 in Table 1). In the interviews you will be asked about the BPEC curriculum, outside influences on the curriculum, your experiences with curriculum mapping and your motivations for doing curriculum-related work. Interviews will be assigned a code-number, transcribed and analyzed for themes and insights into the mapping process under investigation. To maintain confidentiality I will not use your name or your initials in transcriptions, reports, or publications. You may pick your own pseudonym for the study or have one assigned to you by me.

Your participation in this study is entirely voluntary. It is up to you to decide to participate or not participate. You are also free to decide to withdraw from the study at any time. If you decide not to participate in some or all of the study once the study has begun, you do not have to provide any reason for your decision. Your decision will not have any adverse effect on your working relationship with the researcher or your status in the Sport Science department at Douglas College.

Due to the participatory action research nature of this project, and the facts that I (Brian Storey) am a co-worker and the location of this is a shared workplace, the following additional steps will be taken to ensure that individuals wishing to distinguish work-related and research-related discourse and actions can do so easily. For the duration of the study, the researcher will preface all meeting and tasks related to this project with an opening statement clearly demonstrating that the request is associated with the curriculum mapping research project (CMRP). Additionally the email subject tag CMRP, will be used to distinguish all electronic research-related correspondence from everyday work-related correspondence. Finally, during the period of study, I will refrain from being involved in any peer-teaching assessments of colleagues that are associated with formal evaluations.

This study does not involve potential foreseeable risks or discomforts to participants. Your confidentiality and anonymity are assured by adhering to recognized data collection and management standards. Every effort to safeguard your rights listed below will be taken:

- You have the right to confidentiality. Any information that is obtained in this study will remain confidential to the full extent allowed by the law.
- Your identity and personal information will not be available to anyone but the Principal Investigator, Brian Storey and the Faculty Supervisor, Stephen Smith (if requested). Any identifying information about you will be removed. Participants’ names and initials will not be used. Pseudonyms will be used and can be chosen or assigned.
- You may have full access to your interview transcripts at anytime that you deem necessary before transcripts are destroyed.
- You have the right to withdraw from the study at any time without penalty or fear of future consequence.
- There are no consequences for choosing not to participate in this study.
- You may request any reports associated with this study from the Principal Investigator, Brian Storey. He can be reached at Douglas College at (604) 527-5512 or storeyb@douglas.bc.ca

This study has been approved by the Office of Research Ethics of Simon Fraser University. It has also been approved by the Research Ethics Board of Douglas College. If you have any concerns or complaints relating to this research study, you may contact Dr. Hal Weinberg, Director Office of Research Ethics at (778) 782-6593 or by email at hal_weinberg@sfu.ca.
The results of this study will be part of Brian Storey’s PhD dissertation and may be submitted for peer review and publication in journals. Results may also be presented as part of workshops and at conferences.

If you decide to participate in this study, or would like more information, please do not hesitate to contact me at (604) 527-5512 or storeyb@douglas.bc.ca

Participating in this study requires voluntary consent. If you willingly consent to participate please sign below.

Sincerely,

Brian Storey, PhD (c)
Principal Investigator,
Curriculum Theory and Implementation,
Faculty of Education,
Simon Fraser University

INFORMED CONSENT

I understand that I am being asked to participate in the research study titled “Curriculum Mapping and Faculty Agency”, undertaken by Brian Storey under the auspices of Simon Fraser University. I understand that I may withdraw from participation at any time without prejudice or penalty. I understand the risks and benefits of participating in the study. I have read and understood this informed consent document. I freely give my consent to voluntarily participate in the study described herein and titled “Curriculum Mapping and Faculty Agency”.

Participant name: ________________________________
Signature: ______________________________________
Date: __________________________________________

Principal Investigator name: ________________________________
Signature: ______________________________________
Date: __________________________________________
Appendix C  Interview 1 Question Guide

Opening points:
- Welcome and thank you for volunteering to be part of the study on curriculum mapping and agency.
- Today we’re here to discuss your experiences with our Bachelor of PE and Coaching curriculum.
- The interview should take between 20 and 30 minutes.
- I’ll be using information from preliminary interviews to inform my understanding of how our faculty sees our curriculum and how we might best construct our joint-efforts at mapping it.
- If you agree, our interview will be recorded then transcribed.
- To keep your comments confidential, unique demographic information about faculty members will not be associated with specific comments during reporting.
- Do I have your permission to tape-record the session?
- Finally, I’d like to encourage you to be honest and not “buffer” your responses because we work together. The goal of this project is to get the best information we can about curriculum mapping and faculty agency, which requires your forthrightness.

6) There are a lot of things we can map and types of maps we can create. For example, we can make assessment maps, competency maps, pre-requisite maps, experience maps. What would you like to see as a result of this process in the form of maps?

7) Other than the maps themselves, are there other goals you can think of that we should strive for?

8) Given what you know so far about mapping, our curriculum and our department can you imagine any hurdles or pitfalls in front of us that identifying will help us avoid?

9) Is there anything you’d like to add?

Thank you for your time.
Appendix D  Report to Faculty Members 1 – 25/4/2010

Curriculum Mapping Research Project (CMRP) – Report to SPSC Faculty #1

The purpose of these reports
This document represents the first product from the Curriculum Mapping Research Project (CMRP). As a participatory project, these reports are intended to capture progress and insights that emerge from our collective curriculum inquiry and the related research. In addition they can act as focal points for your feedback and comments. As such, feedback and comments are welcome throughout the CMRP project at any stage.

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From interview #1 to crafting a relevant mapping process........................................................................ 1
Initial background findings relevant to constructing our process:...................................................... 1
Summary of emergent goals based on background findings: ............................................................... 2
Summary of maps discussed as desirable:............................................................................................. 2
Summary of pitfalls and hurdles raised: ................................................................................................ 2
Suggested mapping process .................................................................................................................. 3

From interview #1 to crafting a relevant mapping process
The proposed pathway forward presented below represents the consistent trends and explicitly stated goals presented during initial interviews. In addition to the general background information relating to our collective experience with cross-curricular work at Douglas and in Sport Science, the key interview questions for consideration at this phase were: “What would you like to see from the mapping process?” “What kind of maps may be helpful to your practice?” and “What pitfalls and hurdles that if identified may be avoidable?”

Initial background findings relevant to constructing our process:
• There is an uneven experience within the department regarding the DC signature, SPSC signature, and NCCP curriculum based on the length of time an individual has been at the College, courses taught and personal focus.
• There is a genuine and generalized desire to revisit the “big ideas” of our cross-curricular intentions (signature items) based on a number of individual motivations that range from: simply learning about them for the first time to opening up dialogue about what is included, excluded and what should possibly be added.
• Terminology around the DC signature, SPSC signature, and use of words like themes, inter-disciplinary, cross-curricular, and even what we mean when we discuss ‘curriculum’ are not consistent within our group, our documentation, and our individual conversations.
• Of the three areas of discussion, DC signature, SPSC signature, and NCCP material, the NCCP material appears to be well understood by faculty members with regard to how it fits into a particular course if their course is identified as holding a responsibility to the NCCP project.
Summary of emergent goals based on background findings:

- Creation of resource documents and conversation opportunities for those who have not been afforded an opportunity to engage with the DC or SPSC signature.
- Build the process on a foundation of dialogue that revisits the content of the signature at the DC and SPSC levels.
- Build ongoing curriculum dialogue into any curriculum inquiry processes agreed to by faculty members. [All faculty either explicitly or implicitly identified ongoing curriculum dialogue as a component of either what has worked for them in the past or what will make future curriculum endeavours successful.]
- View the CMRP as a catalyst to curriculum inquiry as opposed to a fixed length project with predictable and/or static outcomes. The CMRP is simply a snap-shot in time of the department’s curriculum work and an assessment of the utility of a curriculum mapping process for faculty engaged in curriculum inquiry.
- Create a ‘legacy document’ or set of documents that can be used by new faculty members or outsiders to understand the cross-curricular intentions embedded in our SPSC curricula.

Summary of maps discussed as desirable:

The following were identified as potentially desirable for informing one’s teaching practice. However, as one person stated and others seemed to agree “it’s hard to know what will be useful until we see them”. When asking this question, I always listed at least 4 maps and the two most common responses from the list I presented were assessment and teaching methods maps. The most common map or area of discussion that I did not list in my question was research methods. In addition to signature items, two other types of maps that were raised more than once as potentially useful were content threads and student maps that link course outcomes or activities with a theme or the NCCP. The potential use of maps for student information also had mixed support. The following comments capture some thought as to why student maps may not be received with as much enthusiasm as we present them: “students want ‘what do I need to know’ information a lot of the time [and therefore], overloading them doesn’t always help,” and “if we are presenting student maps, we need to teach the themes or content of the map, otherwise it might just be confusing to them.”

Summary of pitfalls and hurdles raised:

- Commitment: A number of faculty members expressed the fact that to succeed in curriculum inquiry and change all of the faculty involved in course areas related to a signature item (or teaching different sections of the same course) have to follow-through on what is decided by a group in relation to specific cross-curricular actions. The opposite of commitment was expressed by one faculty member as “lip-service” and another as “head-nodding”.
  - A related point that was raised as a potential risk was the ‘Brian factor’. Specifically, that an ongoing commitment to curriculum inquiry is different than a commitment to Brian’s research. Therefore we need our mapping process to foster commitment to curriculum inquiry as its primary motive.
- Time: All faculty members at some point made indirect or direct comment about the time involved in curriculum inquiry and curriculum discussions. The competition for time between disciplinary-based curriculum and pedagogy development and competency-based development was raised as a specific tension by a few.
**Suggested mapping process**

The following is suggested as the steps and or milestones of our current curriculum inquiry, with recognition that we intend to see the process emerge as we need it to in a timely and time sensitive manner that also acknowledges individual schedules and commitments.

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary interviews</td>
</tr>
<tr>
<td>Circulation of ‘CMRP report to SPSC faculty 1’</td>
</tr>
<tr>
<td>- describe emergent mapping process recommendation as a result of interviews</td>
</tr>
<tr>
<td>- process goals identified</td>
</tr>
<tr>
<td>- possible outcomes (maps) identified</td>
</tr>
<tr>
<td>- pitfalls and hurdles identified</td>
</tr>
<tr>
<td>Circulation of background document on cross-curricular work in SPSC</td>
</tr>
<tr>
<td>- this will be a newly created background document (Brian will draft and circulate)</td>
</tr>
<tr>
<td>Group review of signature elements for inclusion/exclusion or updating in BPEC curriculum</td>
</tr>
<tr>
<td>- discussion to occur during work week (Group)</td>
</tr>
<tr>
<td>- notes/results of discussions circulated as ‘CMRP report to SPSC faculty 2’ (Brian)</td>
</tr>
<tr>
<td>Map creation and review – Currickit – curriculum survey software from Guelph</td>
</tr>
<tr>
<td>- step 1: preloading of DC signature and SPSC signature descriptions (Brian)</td>
</tr>
<tr>
<td>- step 2: discussion of assessment/teaching method terminology used in SPSC (Group)</td>
</tr>
<tr>
<td>- step 3: completion of online survey for assigned courses (Individual or Group setting to promote discussion – Lab)</td>
</tr>
<tr>
<td>- step 4: results review and discussion (Group)</td>
</tr>
<tr>
<td>- step 5: circulation of survey and discussion results as ‘CMRP report to SPSC faculty 3’</td>
</tr>
<tr>
<td>Map creation and review – Visual Understanding Environment (VUE) – Tufts University</td>
</tr>
<tr>
<td>- step 1: preload signature work from Fall 2009 (Brian)</td>
</tr>
<tr>
<td>- step 2: missing data added for SPSC signature – course level (Individual Faculty)</td>
</tr>
<tr>
<td>- step 3: translate data to visual maps with course level view for instructors (Brian)</td>
</tr>
<tr>
<td>- step 4: faculty review and determine utility and provide feedback (Group/Individual)</td>
</tr>
<tr>
<td>- step 5: discard, refine, update maps (Brian and other individuals interested)</td>
</tr>
<tr>
<td>- step 6: circulation of maps and discussion results as ‘CMRP report to SPSC faculty 4’</td>
</tr>
<tr>
<td>Follow-up interviews (End of May/June)</td>
</tr>
<tr>
<td>Circulation of ‘CMRP report to SPSC faculty 5 (final)’</td>
</tr>
</tbody>
</table>
Appendix E

External influences on Douglas College SPSC Curricula and Student Experience: A History (2004-2010) and Snapshot (Table of Contents and Table 1)

May, 2010

Introduction
This document represents an overview of the external influences on Sport Science curricula and thereby student experience. Of those influences, it most focused on the SPSC and DC Signature development in the department. It also provides an up-to-date definition for each of the currently recognized Sport Science and Douglas College Signature components and integrates the 2009 review of DC signature items conducted by the SPSC faculty members.

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DC Signature Core competency: Analytical Reasoning 9
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SPSC curriculum development timeline and milestones related to cross-curricular thinking

Table 1 outlines the approximate timeline of curriculum development and curriculum discussions within the Sport Science department in the development of its initiatives.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event or milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>Coaching diploma develops a competency based approach to its course development and integrates a mastery/competency philosophy of learning</td>
</tr>
<tr>
<td>2004</td>
<td>Post-degree Diploma in PE pioneers first program level adoption of academic themes on paper (emphasis = on paper). Program starts with little further discussion of DC Academic Signature (DCAS) at course level in 2005.</td>
</tr>
<tr>
<td>2005</td>
<td>SPSC department themes are developed for BPEC full-program proposal – Faculty members are assigned responsibility and begin work on resources surrounding each theme.</td>
</tr>
<tr>
<td>Fall 2005 to Fall 2006</td>
<td>SPSC theme support documents begin to be developed with definitions and classroom connections (e.g. physical literacy, numeracy, holistic awareness, etc.).</td>
</tr>
<tr>
<td>Fall 2006</td>
<td>SPSC department and DCAS competencies are presented to Degree quality assessment board as part of degree approval presentation.</td>
</tr>
<tr>
<td></td>
<td>BCRPA, NCCP, and High Five are added to curriculum requirements as part of graduation competencies. Decision is made to integrate external curricula into BPEC courses as opposed to have them as simply graduating requirements</td>
</tr>
<tr>
<td>Spring 2007</td>
<td>Sport Science reconciles DC Academic Signature with Sport Science themes to reduce overlap</td>
</tr>
<tr>
<td>Spring 2009</td>
<td>Significant work is done on a scope and sequence in the BPEC program for information literacy as embedded in the BPEC degree.</td>
</tr>
<tr>
<td>Fall 2009</td>
<td>Information literacy follow-up with library shows that library is working on content and modules for instruction around the topic and is developing performance standards for reference by faculty in the area of research literacy.</td>
</tr>
<tr>
<td>Fall 2009</td>
<td>SPSC faculty members complete an academic signature review of courses.</td>
</tr>
<tr>
<td>April 2010</td>
<td>Draft strategic plan reaffirms DC college commitment to the Academic Signature as an educational strategy for ensuring excellence.</td>
</tr>
</tbody>
</table>
Appendix F **Sport Science Signature History**

[P. 15 of report created for project titled “External influences on Douglas College SPSC curricula and student experience”]

**SPSC Signature Summary**

The SPSC signature items, originally called themes, were first conceived in relation to the development of the BPEC curriculum to guide implementation and foster student success in specific areas. In 2007, the DC signature was officially adopted at DC and the overlap was reduced. The resources developed for the SPSC signature items may still be relevant as resources for the DC and other SPSC signature themes as models, definitions and examples.

<table>
<thead>
<tr>
<th>2006 SPSC signature list</th>
<th>2007 Action</th>
<th>Overlapping SPSC and DC Signature items kept in lieu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Management</td>
<td>Kept</td>
<td></td>
</tr>
<tr>
<td>Authentic Assessment and Evaluation</td>
<td>Kept</td>
<td></td>
</tr>
<tr>
<td>Holistic Awareness</td>
<td>Kept</td>
<td></td>
</tr>
<tr>
<td>Inclusion</td>
<td>Kept</td>
<td></td>
</tr>
<tr>
<td>Physical Literacy</td>
<td>Kept</td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>Kept</td>
<td></td>
</tr>
<tr>
<td>Professionalism</td>
<td>Kept</td>
<td></td>
</tr>
<tr>
<td>Organizational Skills</td>
<td>Dropped</td>
<td>SPSC Planning</td>
</tr>
<tr>
<td>Emotional Intelligence</td>
<td>Dropped</td>
<td>DC Teamwork, social responsibility and SPSC professionalism</td>
</tr>
<tr>
<td>Citizenship</td>
<td>Dropped</td>
<td>DC Intercultural Communication</td>
</tr>
<tr>
<td>Communication</td>
<td>Dropped</td>
<td>DC Communication category</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>Dropped</td>
<td>DC Analytic Reasoning</td>
</tr>
<tr>
<td>Informational Literacy (research skills)</td>
<td>Dropped</td>
<td>DC Information literacy</td>
</tr>
<tr>
<td>Instructional Skills</td>
<td>Dropped</td>
<td>SPSC Organizational skills</td>
</tr>
<tr>
<td>Literacy</td>
<td>Dropped</td>
<td>DC written and oral communication</td>
</tr>
<tr>
<td>Numeracy</td>
<td>Dropped</td>
<td>DC Quantitative Reasoning</td>
</tr>
<tr>
<td>Personal and Social Responsibility</td>
<td>Dropped</td>
<td>DC Teamwork</td>
</tr>
<tr>
<td>Problem solving</td>
<td>Dropped</td>
<td>DC Analytic Reasoning</td>
</tr>
<tr>
<td>Teaching and sport technologies</td>
<td>Dropped</td>
<td>Technological Literacy</td>
</tr>
</tbody>
</table>

Documents reviewed in creating this summary:
(Location: H:SPSC Signature\SPSC department Signature documents):

<table>
<thead>
<tr>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>Academic Signature Department.xls</td>
<td>04/2007</td>
</tr>
<tr>
<td>Douglas College Academic Signature Framework and SPSC Themes</td>
<td>10/2006</td>
</tr>
<tr>
<td>Guidelines for Themes</td>
<td>10/2006</td>
</tr>
<tr>
<td>Sport Science Themes defined</td>
<td>05/2006</td>
</tr>
<tr>
<td>Theme integration plan</td>
<td>05/2006</td>
</tr>
<tr>
<td>Signature Elements Matrix</td>
<td>03/2006</td>
</tr>
<tr>
<td>2005-Fall-Faculty-Assignment – Themes</td>
<td>10/2005</td>
</tr>
<tr>
<td>Faculty Assignment – Themes</td>
<td>09/2005</td>
</tr>
</tbody>
</table>
Appendix G

Report to Faculty Members 2 – 5/6/2010

Curriculum Mapping Research Project (CMRP) – Report to SPSC Faculty #2

The purpose of these reports.
As a participatory project, these reports are intended to capture progress and insights that emerge from our collective curriculum inquiry on the research side. They are meant to act as focal points for your feedback and comments if you should so wish.

Review of DC and SPSC signature
Over the course of May, 3rd and 4th, an overview of the history of the SPSC signature and DC signature was presented and discussed by the group. Emergent questions relating to choices and mandate that led to our degree came from the curriculum discussion and conversation followed to situate the BPEC program, DC and SPC signature theme development and how we arrived where we are. In addition, a backwards design approach was suggested by some members of the group, whereby we describe our ideal graduate before describing what we want to embed as cross-curricular Sport Science signature competencies. Small group discussion on the SPSC signature items led to larger group discussion on inclusion or exclusion of the item. Most of the discussion time was spent on the ideas surrounding holistic awareness and physical literacy. In the end, both terms were kept and an additional signature item: “Qualitative Inquiry” was added to the SPSC signature to represent the knowledge, skills, and values associated with it.

Noted limitations on the process:
- Qualitative inquiry did not receive a definition or description of levels of competence at the time of the discussion. It was entered into Currikit as a signature item to simply identify those courses and instructors who may want to discuss what they are doing around qualitative inquiry.
- There were a number of suggestions for tweaking definitions of other signature items, particularly, physical literacy and holistic awareness that did not get integrated and reproduced back to the group for confirmation before moving to Currikit course surveys.
- Time for individual thinking and reflection on the items was restrained and therefore, the current list of signature items should be seen as in draft form and open to edits and revisions over a specified period of time.

Actions to be taken:
- I will update the SPSC Theme overview document with any edits that were passed on and with the heading “Qualitative inquiry” and circulate the changed pages for insertion.

Facilitation reflection:
I am honestly torn as to identifying the ideal format for this kind of curriculum inquiry by a group. The condensed format we’ve been undertaking can be compared to the “slow-brew” methods, whereby items are introduced at one meeting and then discussed at the next. There are limitations to both. Perhaps a condensed introduction, then revisiting items in a coherent manner is the middle and necessary ground or vice-versa. What is clear to me is that documents should have been circulated much earlier to introduce the history of the signature and those who wanted to engage the documents ahead of time would have had the opportunity.
As a result of these insights and the understanding that the process we have engaged in so far is ultimately a learning process regarding the language and terminology of our degree, the College, the signature, and the instructional methods and assessments we chose, I would only consider the data and decisions made so far to be formative and a tool for further discussion.

**Mea culpa**
A process error made by me that would not be made by a more detached facilitator was my changing of the Holistic Awareness definition during transcription from our 2007 files to the 2010 overview document. It attached me in a way to the discussion that was unnecessary and limited the possibility for exclusion of the item had that been the desire of the group.

**Review of instructional and assessment methods and assessment technique language by group**
The group also undertook a discussion of instructional methods that can be used to describe how we teach and work with our students to foster learning. The base list was pulled from the Currikit software and items were added, removed or edited in relation to discussion.

**Facilitation reflection:** We discussed instructional terminology quickly at the possible expense of spending the time to reach shared understanding on descriptions for each associated instructional term. It was evident that the Currikit terminology needed local examples and local terms needed to be added to represent our common language. Developing definitions over a period of time and allowing people time to connect the terms to their courses through definition review would have been preferable and possible with foresight on my part. That said, the condensed format has also now provided us with a draft set of terms that can act as a resource and be expanded and defined if the group wants to have a common referent document.

**Resultant products of preliminary discussion:**
File: SPSC Instructional and Assessment Methods 2
Data: We were able to proceed with Currikit Survey “SPSC Curriculum Mapping 2010”
Initial background findings relevant to constructing our process:

What the following represents is an update to the tasks of the mapping process provided in CMRP report to faculty #1. Steps 2 and 3 were discussed, Monday May, 3. Step 4 discussion started on May 3rd, continued on May 4th. Step 4 reached partial conclusion before moving onto step 5 in that inclusion/exclusion was decided in relation to SPSC themes, but detailed revisions were not completed and a new SPSC signature item (qualitative inquiry) had no definition and differentiation produced by the group due to time constraints. Step 5 was undertaken on the afternoon of May 4 with the limitations identified in step 4 understood. Given the time considerations of the process so far and the potential limited utility of the VUE software in the short term, it is suggested that step 6 be dropped in favour of finding direction from the group as to how they would like to proceed.

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Preliminary interviews</td>
</tr>
<tr>
<td>2</td>
<td>Circulation of 'CMRP report to SPSC faculty 1'</td>
</tr>
<tr>
<td></td>
<td>- describe emergent mapping process recommendation as a result of interviews</td>
</tr>
<tr>
<td></td>
<td>- process goals identified</td>
</tr>
<tr>
<td></td>
<td>- possible outcomes (maps) identified</td>
</tr>
<tr>
<td></td>
<td>- pitfalls and hurdles identified</td>
</tr>
<tr>
<td>3</td>
<td>Circulation of background document on cross-curricular work in SPSC</td>
</tr>
<tr>
<td></td>
<td>- this will be a newly created background document (Brian will draft and circulate)</td>
</tr>
<tr>
<td>4</td>
<td>Group review of signature elements for inclusion/exclusion or updating in BPEC curriculum</td>
</tr>
<tr>
<td></td>
<td>- discussion to occur during work week (Group)</td>
</tr>
<tr>
<td></td>
<td>- notes/results of discussions circulated as 'CMRP report to SPSC faculty 2' (Brian)</td>
</tr>
<tr>
<td>5</td>
<td>Map creation and review – Currickit – curriculum survey software from Guelph</td>
</tr>
<tr>
<td></td>
<td>- step 1: preloading of DC signature and SPSC signature descriptions (Brian)</td>
</tr>
<tr>
<td></td>
<td>- step 2: discussion of assessment/teaching method terminology used in SPSC (Group)</td>
</tr>
<tr>
<td></td>
<td>- step 3: completion of online survey for assigned courses (Individual or Group setting to promote discussion – Lab)</td>
</tr>
<tr>
<td></td>
<td>- step 4: results review and discussion (Group)</td>
</tr>
<tr>
<td></td>
<td>- step 5: circulation of survey and discussion results as 'CMRP report to SPSC faculty 2'</td>
</tr>
<tr>
<td>6</td>
<td>Map creation and review – Visual Understanding Environment (VUE) – Tufts University</td>
</tr>
<tr>
<td></td>
<td>- step 1: preload signature work from Fall 2009 (Brian)</td>
</tr>
<tr>
<td></td>
<td>- step 2: missing data added for SPSC signature – course level (Individual Faculty)</td>
</tr>
<tr>
<td></td>
<td>- step 3: translate data to visual maps with course level view for instructors (Brian)</td>
</tr>
<tr>
<td></td>
<td>- step 4: faculty review and determine utility and provide feedback (Group/Individual)</td>
</tr>
<tr>
<td></td>
<td>- step 5: discard, refine, update maps (Brian and other individuals interested)</td>
</tr>
<tr>
<td></td>
<td>- step 6: circulation of maps and discussion results as 'CMRP report to SPSC faculty 4'</td>
</tr>
<tr>
<td>7</td>
<td>Follow-up interviews (End of May/June)</td>
</tr>
<tr>
<td>8</td>
<td>Circulation of 'CMRP report to SPSC faculty 5 (final)'</td>
</tr>
</tbody>
</table>
Appendix H  SPSC Instructional and Assessment Methods

The following instructional and assessment terminology were discussed by the SPSC faculty on May 4, 2010 for inclusion in the Currickit curriculum mapping survey. A draft list of methods from Currickit was used as a starting point and methods were added, edited, and deleted depending on whether they were identified as relevant to SPSC courses.

Instructional Methods:

<table>
<thead>
<tr>
<th>Instructional Methods</th>
<th>Description/additions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case study</td>
<td></td>
</tr>
<tr>
<td>Demonstration</td>
<td></td>
</tr>
<tr>
<td>Design project</td>
<td></td>
</tr>
<tr>
<td>Field Experience</td>
<td></td>
</tr>
<tr>
<td>Formal Group Work</td>
<td></td>
</tr>
<tr>
<td>Guest Speaker (External)</td>
<td></td>
</tr>
<tr>
<td>Guest Speaker (Internal)</td>
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</tr>
<tr>
<td>In-class activity</td>
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</tr>
<tr>
<td>In-class Writing</td>
<td></td>
</tr>
<tr>
<td>Informal Discussions/Group Work</td>
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</tr>
<tr>
<td>Laboratory/Tutorial</td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>Multi-media Presentation</td>
<td></td>
</tr>
<tr>
<td>Peer Teaching</td>
<td></td>
</tr>
<tr>
<td>Peer/self assessment</td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Self-reflection/Journal</td>
<td></td>
</tr>
<tr>
<td>Seminar</td>
<td></td>
</tr>
<tr>
<td>Service learning</td>
<td></td>
</tr>
<tr>
<td>Simulation/Role-Playing/Game</td>
<td></td>
</tr>
<tr>
<td>Student Presentation</td>
<td></td>
</tr>
<tr>
<td>Assessment Method</td>
<td>Description/additions</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Case Analysis</td>
<td></td>
</tr>
<tr>
<td>Case Creation</td>
<td></td>
</tr>
<tr>
<td>Graphics (Maps, Plans, Schematics, Blueprints)</td>
<td></td>
</tr>
<tr>
<td>Interviews</td>
<td></td>
</tr>
<tr>
<td>Journal/Reflective Writing</td>
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</tr>
<tr>
<td>Lab Report - Group</td>
<td></td>
</tr>
<tr>
<td>Lab Report - Individual</td>
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</tr>
<tr>
<td>Mastery quizzes</td>
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<tr>
<td>Mentor (external) evaluation</td>
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<tr>
<td>Observation of student instruction (instructor)</td>
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</tr>
<tr>
<td>Observation of student instruction (peer)</td>
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<tr>
<td>Oral Presentation (Group)</td>
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<tr>
<td>Oral Presentation (Individual)</td>
<td></td>
</tr>
<tr>
<td>Participation (On-line Contributions)</td>
<td></td>
</tr>
<tr>
<td>Portfolio</td>
<td></td>
</tr>
<tr>
<td>Poster - Group</td>
<td></td>
</tr>
<tr>
<td>Poster - Individual</td>
<td></td>
</tr>
<tr>
<td>Problem Sets</td>
<td></td>
</tr>
<tr>
<td>Professionalism-contribution (In-class)</td>
<td></td>
</tr>
<tr>
<td>Project - multi-media (Individual)</td>
<td></td>
</tr>
<tr>
<td>Project - multi-media (Group)</td>
<td></td>
</tr>
<tr>
<td>Research paper – group</td>
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</tr>
<tr>
<td>Research paper – individual</td>
<td></td>
</tr>
<tr>
<td>Self/Peer Evaluation</td>
<td></td>
</tr>
<tr>
<td>Skill analysis</td>
<td></td>
</tr>
<tr>
<td>Skills Demonstration</td>
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</tr>
<tr>
<td>Strategy analysis</td>
<td></td>
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<tr>
<td>Task or hourly log - external sign-off</td>
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<tr>
<td>Test/Quiz/Exam ( &gt; 25% of Final Grade )</td>
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<tr>
<td>Test/Quiz/Exam ( ≤ 25% of Final Grade )</td>
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<tr>
<td>Working prototype</td>
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</table>
Appendix I  Sample Curriculum Map in VUE– Quantitative Reasoning

This map show the interconnection between level 3 outcomes of quantitative reasoning, the program year level, specific courses, and instructors responsible for the competency.
Appendix J Report to Faculty Members 3 – 5/28/2010

Curriculum Mapping Research Project (CMRP) – Report to SPSC Faculty #3

The purpose of these reports.
As a participatory project, these reports are intended to capture progress and insights that emerge from
our collective curriculum inquiry on the research side. They are meant to act as focal points for your
feedback and comments. Please feel free to respond to these reports with feedback, expansions,
omissions, etc.

May 6th: discussion review of CMRP #2 and action research process
On May 6th, the group met to review the results of the Currickit data that was entered on May 4th and
discuss the path forward given the experiences of May 3rd and 4th. The first order of business was to
review CMRP report #2 as a group. Copies of the report were distributed and Brian spoke to key points.
Discussion followed about the process so far and there was general agreement that the definitions and
shared understanding of the academic signature, SPSC signature, teaching methods, and assessment
methods did not reach the pre-requisite level necessary in order for Currickit results to be seen as more
than exploratory after the first attempt at applying the terminology.

During this discussion, feedback on the action research process was also given by members of the group
with regard to the fact that the limited time-slots for each discussion (e.g. teaching methods and
assessments had about 1.5 hours total), were not long enough to meet the true ‘participatory’ nature of
the research design. I agreed and share these sentiments. It could have been a richer process had we
extended it out and allowed time to recursively visit the signature items and teaching and assessment
methods over a longer period of time (meetings). This limitation was raised again when we reviewed the
types of reports that Currickit provided us with.

As part of the review of CMRP report #2, the recommendation to adjust the action research schedule
was reviewed. The original plan was too ambitious for the time and energy it takes to engage in deep
exploration of curriculum and as such the recommendation to drop the formal VUE software review
component was made and agreed to by the group.

May 6th: discussion review of Currickit results
Following the CMRP report #2 discussions, the group engaged in a “Here’s what, so what, now what”
discussion of the results of the Currickit software results.

Here’s what!
A demonstration of the data that was available from Currickit was presented and it was agreed that the
pilot nature of the project and still developing definitions of the SPSC signature, teaching and
assessment methods meant that the data being used to discuss the curriculum be seen as draft and not
conclusive or necessarily fully accurate in its representation of our curriculum and practice.

We looked at Currickit reports and demonstrated the ability to drill into the reports to see summaries of
courses that share the same instructional or assessment strategies as well as the same level of coverage
of a chosen Signature item.[See appendix A for a sample based on the “Written Communication”
signature item]:

Filename: CMRP_report_to_spsc_faculty_3
Reports for the following questions were reviewed during the meeting:

- What instructional strategies and pedagogical techniques do you use in your course?
- What formal assessment approaches do students engage in for this course?
- Is the following developed in your course?
- What is the level of sophistication expected for the following?
- Please specify how each quality is Taught and/or Assessed

So what?
During the conversation of what Currict is capable of, the questions and comments moved us from demonstration of functionality to a discussion of “so what?” During this section, a number of questions and comments were raised, some of which were left as questions for consideration in future mapping and signature work and some of which attracted feedback and rich discussion providing direction and insight. One faculty member acted as recorder and the Q & A section below is a summary of those notes. [Editors note: The questions and comments below are organized in an unfolding sequence that appears highly structured, however, the actual discussion flowed between the layers and questions below, with each new question either recursively bringing us back to an early topic or opening new questions.]

ACTION REQUEST: Faculty members are encouraged to email me any additional written feedback, comments, or answers to questions that arise while reading these notes.

Q1. Are these reports useful and in what ways?

Comments:
- The ability to see when and where meta-curriculum concepts such as signature items are taught and assessed in the curriculum was considered helpful, and almost necessary if we are going to address our student’s overall experiences, however, the following limitations were raised in direct relation to the utility of the tools:
  - The fact that someone reported using a certain teaching strategy or assessment technique provided no detail as to the weight or emphasis of the strategy. For example two people who reported using lecture to teach numeracy may use it 20% of the time in one case and 80% of the time in another.
  - Required courses external to Sport Science play a role in meta-curricular knowledge, skill and value construction and as such need to play a part in mapping.
  - General “in-group” agreement about the definitions of signature items is required for the reports to be valid.
- The reports were also seen as useful as discussion starters for defining groups that should be discussing specific signature themes due to either the related sequencing of the courses or the overlap in signature coverage (i.e. they help identify who should be getting together).

Q2. What curriculum views help you to understand other people’s courses? Do we need examples of how the concept is being treated in other’s courses? E.g. do we need to see sample assignments?
Comments:
- Faculty expressed a desire to have course level reports, however, this feature was either not available in CurricKit at this time.
- There was one suggestion of being able to attach files such as a “scope and sequence” or examples in the teaching strategies and assessment section in the software so that they could be viewed as resources.

Q3. Do the instructional models we use across the courses for discussing signature items matter? (e.g. to illustrate the critical thinking model and emotional intelligence model employed across a number of courses were discussed).

Comment:
- Very little time was spent on this question before moving on and strong opinions were not expressed on either side of it at the meeting before moving on.

Q4. If you are assessing, but not teaching a concept, what level are you assessing it at? I.e. For writing, what are the performance standards you and the College-wide community are using?

Comments:
- When we are assessing but not teaching, the performance standards and hopefully the teaching modules may come from external areas in the College. The example provided was the library’s attempts to develop performance standards and mastery modules for information literacy.
- There is a connection between SIGNATURE – COMPETENCY – PERFORMANCE STANDARD, where the signature is the area of interest broadly described, the competency is the knowledge, skill, or attitude to be displayed, and the performance standard gives some measure of detail to assess how well the competency has been performed. Rubrics can be considered a form of performance standard document if it describes performance details and grading differentiation.

Q5. Do we want performance standards that are public for students and teachers to use together?

Comments:
- The “Quinn” example was used to demonstrate an 8 year old reviewing his own work using student-friendly writing performance standards and identifying what could be improved and what was going well. Without the student-friendly performance standard, the feedback may not have been as relevant to Quinn.
- The creation of use of performance standards is well documented in professions like medicine and we may be able to look to them for examples of the practice.
- There was general support for the idea with recognition that:
  o we shouldn’t have to derive all the information from scratch,
  o they need to be developed, piloted, and understood by faculty members before a rush to implementation
  o they are a tool for learning and transparency.

Q6. Do we need to link learning outcomes in each class with a concept or signature item?
- CurricKit does not go to that level of detail. CurricKit starts the discussion, but it does start the conversation and allow for groupings of people working on similar concepts.
- A more detailed view would allow us to see redundancy, reinforcement, and gaps.
- The time cost has to be weighed against the perceived benefit to faculty members.
- At this time it would be a waste of time because the definitions and shared understanding of signature items has not achieved the pre-requisite level to make the more detailed views of curriculum links meaningful.
- The CurricKit software did not have the file addition capabilities or the detail level to achieve this, therefore other means of achieving this would be necessary.

Process related comments:
- The definitions of any new signature items needs to be discussed further and then if possible organized into categories like the Communication example it the DC academic signature.

Now what?
After discussing the “so what!”, we moved onto the “Now what” phase of the discussion. This phase was an open discussion about the future of mapping and this particular project in the Sport Science department. It was emphasized at the outset of this portion of the discussion that only the will of the group to understand the curriculum at the meta-curriculum level through mapping can carry this project beyond this initial research agenda. Brian offered to continue to support the project beyond the research phase if the group wanted to continue and deems the potential at this point worth the effort.

Q7. Would faculty members like “Read only access” to all of the reports and information in CurricKit? This would allow you to go in, play around and make your own reports.

Comment:
- There was unanimous agreement that unless the group had a better shared understanding (through ongoing and deeper discussion) of the instructional and assessment terminology and the signature items, the data in the system at the moment is pilot data and could be misleading and result in false conclusions. Therefore, read-only access at this point in the project was not seen as desirable by the group.

Q8. Does the group want an “edited version” of this data, meaning do we want to revisit CurricKit now that we’ve been through it and update the data more accurately?

Comments
- Not until we’ve addressed our SPSC signature definitions.
- Not all at once and not until we define and work on a process that is efficient and has instructor utility
- This question led us to a discussion of “where do we go from here with mapping”. As a colleague who is accountable to the group beyond the research, I committed my support to attempting to enact their wishes in relation to mapping if a path was identified by the group that it wanted to follow.
Emergent process criteria:
- There were a number of ideas and timelines of how to proceed with the main considerations being a desire for:
  1. an efficient process, [the difficulty in this criteria being that efficiency is a personal measure of time/energy cost in relation to perceived benefit]. and therefore,
  2. a personally relevant and beneficial process – meaning there must be added value to one's teaching and the student experience as a result of the process, and
  3. a discursive process that includes time and space for feedback on definitions, standards, conceptual and teaching models where applicable (e.g. Critical Thinking and E.I.) and examples.

Process suggestions:
1. Pick one signature item (e.g. written communication) and pilot it through a mapping/development process to learn how to best translate meta-curricular concepts from institutional and department intention to student experience and competency. **Comment:** Attention to the process was raised by many faculty members. It was deemed very important due to the fact that meta-curricular efforts by necessity involve many faculty members, can be both enabling and constraining, and if they have no impact on student experience and learning could be a tremendous waste of time.

2. Divide up the signature items and develop some expertise and support documentation in sub-groups so that when we get together the discussions are more informed, richer and more detailed.

3. Use course groupings from CurricKit pilot data and our course knowledge to identify “signature threads” and then have those people for groups around the core signature items in the course threads with the understanding that not all courses need be, nor should be responsible for all items. Three draft threads that would likely have overlap and sequencing in signature items were quickly constructed on the board as:
   1. Social Science Thread: 1105, 2205, 3240, 3158, 4291
   2. Kinesiology Thread: Biol 1109, 1209, 2275, 3275, 4256
   3. Activity/Practice Thread: 13XX, 23XX, 3399, 4199

Process actions:
- The path the group discussed in relation to the big question “Now What?” combined suggestions 1, 2, and 3 above. Two signature-related areas were identified by the group as being of current interest/concern; written communication and research skills.

Written communication
- Based on suggestion 3 above, Brian was tasked with creating a course thread and summary that describes what we know from the mapping exercise about where, when
and how written communication is taught and assessed in our program. [See Appendix A]
  o In the Fall and when time is available on the department agenda or in separate meetings
    if desired, written communication will be added as an agenda item to department
    meetings. Faculty Responsibilities were not assigned by the group at this time for
    investigating and sharing performance standards (exemplars), teaching models (if
    relevant), instructional and assessment strategies etc.
  o Eventually, a re-mapping of written communication that either re-explores Currickit or
    uses an alternate tool will try to capture the information in a way that has utility for
    current faculty, future faculty and students.

Research Skills
  o Due to the fact that research skills are not uniquely identified as a DC or SPSC signature
    item, but instead overlap a number of signature areas including Information literacy,
    technological literacy, numeracy, and qualitative inquiry, a similar process may be used
    for each area as for written communication; however, two steps emerge as necessary
    before proceeding too far with a research skills curriculum inquiry.
    1. A backwards design process that identifies what we are hoping our students will
       achieve in each research related area in relation to specific forms of inquiry is
       necessary. I.e. what are the requirements/expectations of their future
       professions or academic pursuits, their current course requirements, and
       external transfer requirements in each related signature area.
    2. The development of our SPSC qualitative inquiry signature item in order to
       ensure that as a defined competency, the levels of student understanding and
       competence, support literature and teaching information, etc. can be developed
       around the signature item. [See appendix B for the Qualitative Inquiry
       summaries from Currickit – useful for identifying individuals and courses for
       discussion purposes].

VUE Demonstration

Although the Visual Understanding Environment (VUE) software was dropped from the official
research agenda, the software was demonstrated in a 15 minute section at the end of the sessions. The
potential as a “just-in-time” view of the curriculum with embedded resources was used to demonstrate
the possibility of a more visual map and interface for viewing one’s curriculum. The software has the
ability to attach files to courses, highlight course connections, signature connections and faculty
responsibilities (information currently contained in separate files). In the search for a tool that may add
value to a faculty member’s curriculum experience by providing information connections not otherwise
available without the map VUE was seen as having some potential, but also, has limitations like all
software in that the user interface and updating may be difficult. The response was positive enough that
it will continue to be explored as a tool of potential for department use by Brian into the Fall. [See
Appendix B for a sample of a curriculum map for Qualitative reasoning level 3]
## Truncated CMRP research process

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Preliminary interviews</td>
</tr>
</tbody>
</table>
| 2 | Circulation of ‘CMRP report to SPSC faculty 1’  
- describe emergent mapping process recommendation as a result of interviews  
- process goals identified  
- possible outcomes (maps) identified  
- pitfalls and hurdles identified |
| 3 | Circulation of background document on cross-curricular work in SPSC  
- this will be a newly created background document (Brian will draft and circulate) |
| 4 | Group review of signature elements for inclusion/exclusion or updating in BPEC curriculum  
- discussion to occur during work week (Group)  
- notes/results of discussions circulated as ‘CMRP report to SPSC faculty 2’ (Brian) |
| 5 | Map creation and review – Currickit – curriculum survey software from Guelph  
- ☑ step 1: preloading of DC signature and SPSC signature descriptions (Brian)  
- ☑ step 2: discussion of assessment/teaching method terminology used in SPSC (Group)  
- ☑ step 3: completion of online survey for assigned courses (Individual or Group setting to promote discussion – Lab)  
- step 4: results review and discussion (Group)  
- step 5: circulation of survey and discussion results as ‘CMRP report to SPSC faculty 3’ |
| 6 | Map creation and review – Visual Understanding Environment (VUE) – Tufts University  
- step 1: preload signature work from Fall 2009 (Brian)  
- step 2: missing data added for SPSC signature – course level (Individual Faculty)  
- step 3: translate data to visual maps with course level view for instructors (Brian)  
- step 4: faculty review and determine utility and provide feedback (Group/individual)  
- step 5: discard, refine, update maps (Brian and other individuals interested)  
- step 6: circulation of maps and discussion results as ‘CMRP report to SPSC faculty 4’ |
| 7 | Follow-up interviews (End of May/June) |
| 8 | Circulation of ‘CMRP report to SPSC faculty 5 (final)’ |
## Appendix A – Currickit reports for Written Communication

### DC Signature: Written Communication - Taught & Assessed

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>01</td>
<td>SPSC 1105 Introduction to the Study of Sport</td>
<td>LEC 002</td>
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<tr>
<td>02</td>
<td>SPSC 1164 Dynamics of Motor Skill Acquisition</td>
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<tr>
<td>03</td>
<td>SPSC 1192 Topics in Human Nutrition</td>
<td>LEC 001</td>
</tr>
<tr>
<td>04</td>
<td>SPSC 1311 Performance Analysis: Tennis Badminton</td>
<td>ACTIVITY 001</td>
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<tr>
<td>05</td>
<td>SPSC 1316 Movement Education/Gymnastics</td>
<td>ACTIVITY 001</td>
</tr>
<tr>
<td>06</td>
<td>SPSC 1317 Applied Methods: Dance</td>
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<tr>
<td>07</td>
<td>SPSC 2205 Leisure and Sport in Canadian Society</td>
<td>LEC 001</td>
</tr>
<tr>
<td>08</td>
<td>SPSC 2205 Leisure and Sport in Canadian Society</td>
<td>LEC 002</td>
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<tr>
<td>09</td>
<td>SPSC 2231 Sport and Exercise Psychology</td>
<td>LEC 001</td>
</tr>
<tr>
<td>10</td>
<td>SPSC 2252 Contemporary Health issues</td>
<td>LEC 001</td>
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<tr>
<td>11</td>
<td>SPSC 2275 Physiology of Exercise and Training</td>
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<td>12</td>
<td>SPSC 3158 Inclusive Physical Activity</td>
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<td>13</td>
<td>SPSC 3203 Health Promotion</td>
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<td>SPSC 3275 Advanced Physiology of Exercise and Training</td>
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<td>SPSC 4199 Physical Education and Coaching Methods</td>
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<td>16</td>
<td>SPSC 4231 Advanced Exercise and Sport Psychology</td>
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<td>17</td>
<td>SPSC 4291 Curriculum and Planning Issues in PE and Coaching</td>
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### DC Signature: Written Communication - Taught; Not Assessed

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<td>01</td>
<td>SPSC 1313 Applied Methods: Athletics and Swimming</td>
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### DC Signature: Written Communication - Not Taught; Assessed

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<td>SPSC 1103 Conditioning for Sport and Physical Activity</td>
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<td>SPSC 1105 Introduction to the Study of Sport</td>
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<td>04</td>
<td>SPSC 1151 Biomechanics</td>
<td>LEC/LAB 001</td>
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<td>05</td>
<td>SPSC 1192 Topics in Human Nutrition</td>
<td>LEC 002</td>
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<tr>
<td>06</td>
<td>SPSC 1195 Physical Growth and Motor Development</td>
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<td>07</td>
<td>SPSC 1200 Fieldwork II</td>
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<td>08</td>
<td>SPSC 1314 Performance Analysis: Wrestling and Judo</td>
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<td>09</td>
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<td>SPSC 1319 Alternative Environment Education: Winter</td>
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<td>14</td>
<td>SPSC 2322 Applied Methods: Rugby and Soccer</td>
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<td>15</td>
<td>SPSC 2324 Applied Methods: Basketball and Fieldhockey</td>
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16 SPSC 2325 Applied Methods: Volleyball and Softball - ACTIVITY 001
17 SPSC 3100 Fieldwork V - FW 001
18 SPSC 3200 Fieldwork VI - FW 001
19 SPSC 3240 Leadership in Sport, Physical Education & Coaching - LEC
20 SPSC 3276 Athletic Injury Assessment and Management - LEC/LAB 001
21 SPSC 3399 Games Approach to Teaching and Coaching - LEC/ACTIVITY 001
22 SPSC 4100 Fieldwork VII - FW 001
23 SPSC 4161 Fitness Assessment and Prescription - LEC/ACTIVITY 001
24 SPSC 4200 Fieldwork VIII - FW 001
25 SPSC 4256 Advanced Sport Analysis - SEM 001

## DC Signature: Written Communication

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<td>Self/Peer Evaluation</td>
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<td>Lab Report - Individual</td>
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<td>Mentor (external) evaluation</td>
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<td>Poster - Group</td>
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<td>Project - multi-media (Group)</td>
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<td>Poster - Individual</td>
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<td>Mastery quizzes</td>
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<td>Oral Presentation (Group)</td>
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<td>Portfolio</td>
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<td>Skills Demonstration</td>
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<td>Research</td>
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<td>Formal Group Work</td>
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<td>Self-reflection/Journal</td>
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<td>Student Presentation</td>
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<td>Case study</td>
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<td>Design project</td>
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<td>In-class activity</td>
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<td>Laboratory/Tutorial</td>
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<td>Peer Teaching</td>
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<td>Peer/self assessment</td>
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<td>Simulation/Role-Playing/Game</td>
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<td>Demonstration</td>
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<td>Multi-media Presentation</td>
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<td>Seminar</td>
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APPENDIX B

VUE Sample of the curriculum organized
VUE Sample with Quantitative Reasoning level 3 highlighted with one order of connection
Appendix K
Interview 2 Question Guide

Post-interview questions

Opening points:
- The interview should take between 30 and 45 minutes.
- The interview is a reflection on the curriculum mapping we undertook and a discussion relating to our BPEC curriculum.
- If you agree, our interview will be recorded then transcribed.
- To keep your comments confidential, unique demographic information about you will not be associated with specific comments during reporting.
- Do I have your permission to tape-record the session?
- Finally, I know I reminded you in the first interview to try to be honest, and I’d like to encourage you again to do so again with the knowledge that others may be able to learn from our experiences here in Sport Science and that I personally and not vested in a specific outcome from this study other than learning.

Questions:
1) What (if anything) did you learn about the BPEC curriculum during the mapping process?

2) During the process were there any parts of the discussion that stood out as surprising or more interesting to you than others?

3) Did the discussions have any impact any of your curriculum plans for next year?

4) Some of the goals we identified as a group for the process were accountability/follow-through and dialogue. To be more specific, lack of follow-through was more accurately termed “the head nod” by the group. Now that you’ve had a taste of a mapping process, do you see potential in a mapping process to meet these goals?

5) With the benefit of hindsight and imagination, what would you include in a mapping process now that you’ve had a pilot experience?
   a. What would be most helpful to your teaching?

6) In the first interview, we talked about the courses you teach and you’ve now had the chance to enter some data relating to the signature about those courses into Currickit. Can you pick one course that you are responsible for and give some examples for me of how the Douglas College signature and/or Sport Science signature relate to that course:
   a. Are the examples you gave what you’d consider the main signature items for your course(s)?
   b. Do you see your course as needing to cover all signature items in depth?
Appendix L  BPEC Course Progression Maps Generation 2

Bachelor of Physical Education and Coaching Course Progression Map

Year 1:
- SPSC 1195
- BIOL 1103, or SPSC 1190
- English 1130

BPEC 2nd Year Entrance: 30 credits including those above this line
- SPSC 2210 (Found. PE & Coaching) (PR:SPSC 1103, 1105)
- SPSC 2276 (FR: Biol 1106 & 1209 or, SPSC 1100 & 1101)
- SPSC 2206 or 2211 (ENGL 1105)

Year 2:
- SPSC 2231
- Math 1191

BPEC 3rd Year Entrance: 60 credits including those above this line
- SPSC 2200 (PR: 2100)
- SPSC 2276 (PR: SPSC 2276)
- SPSC upper level electives (Core)

Years 3 and 4:
- SPSC 4199 (PR: SPSC3999)
- SPSC 4231 (PR: SPSC 2231)
- Phi 4200

remaining req.
- Lower-level SPSC electives (9)
- SPSC 1101, 1104, 1106, 1109, etc.
- SPSC 1101, 1104, 1106, 1109, etc.
- SPSC 1101, 1104, 1106, 1109, etc.
- SPSC 1101, 1104, 1106, 1109, etc.

Open Elective (9)
- Upper or Lower
- Elective (3)
- Elective (3)

Non-SPSC Electives (21)
- Eng Lit elective (3)
- Non-SPSC Lab Sci. (3)
- Non-SPSC elective (3)
- Non-SPSC elective (3)
- upper level Non-SPSC (3)
- upper level Non-SPSC (3)
- upper level Non-SPSC (3)