

Exploring Capacity Building of Ontario Dental Hygiene Educators During National
Curriculum Reform

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Abstract

In times of educational change, educators are given the task of implementing new initiatives that meet the needs of a changing environment; yet, they are often dismissed from developmental phases of the reform. This top-down structure deters educators' personal capacity building as their knowledge, values, assumptions, and beliefs are not acknowledged or explicitly developed as part of the initiative. This study explored Ontario dental hygiene educators' perspectives of how they may build personal capacity during an externally mandated national curriculum reform, the Entry-to-Practice Competencies and Standards for Canadian Dental Hygienists (National Competencies). Narratives were collected from 5 dental hygiene educators of diverse educational training and teaching organizations. Three themes emerged that included perceptions of structural influence, perceptions of learning access, and perceptions of identity. Each theme was linked to tasks that were required to build personal capacity for sustainable school change. The theoretical framework and the required tasks demonstrated the interconnectedness between educators, leaders, and the organization for building educators' personal capacity.

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CHAPTER ONE: INTRODUCTION TO THE STUDY

There has been recent reform in the school curriculum for dental hygiene colleges across Canada. The new Entry-to-Practice Competencies and Standards for Canadian Dental Hygienists (National Competencies) document was published in January 2010 by the dental hygiene governing bodies (Canadian Dental Hygienists Association [CDHA]¹, 2010a). These competencies were provided to both diploma and degree-granting dental hygiene colleges to be nationally implemented in the curriculum. While documentation of the development of these competencies described the process as collaborative, the largest class of stakeholders, the educators, was largely uninvolved. Yet, it is these educators who are responsible for ensuring dental hygiene students are successful in acquiring the entry-to-practice competencies before graduation. To date, there have been no publications on the dental hygiene educators' perspectives of this mandated curriculum reform, nor have they been given the opportunity to publically voice their experiences. This study was undertaken to explore Ontario dental hygiene educators' perceptions of how they may build personal capacity to implement and evaluate the National Competencies.

Background

Prior to the publication of the National Competencies, the dental hygiene profession did not have one national standard for entry-to-practice in the profession. Development of the National Competencies was considered ideal for standardizing the number of different dental hygiene programs in diverse credentialing colleges. As Sunell, Richardson, Udahl, Jamieson and Landry (2008) explained:

¹A legend of Acronyms is provided in Appendix A.

The need for such a standard is becoming increasingly important with the divergence of entry-to-practice educational models across Canada, programs being implemented in new jurisdictions (e.g. New Brunswick), and the entrance of multiple post-secondary organizations into the educational sector. Post-secondary organizations now include private and public organizations as well as colleges and technical institutes, university-colleges and universities. (p.27)

What originally began as reviewing and revising learning outcomes of the dental diploma and degree programs by Board members of the Dental Hygiene Educators of Canada (DHEC), resulted in broadening the project to include development of national competencies and standards to be achieved upon entry-to-practice in the dental hygiene profession (Sunell, Richardson, Udahl, Jamieson, & Landry, 2008). This followed a movement in general post-secondary education that was adopting outcomes-based education (OBE) and competency-based education (CBE), as well as learning outcomes reflective of “real world” learning and authentic assessments that linked learning and evaluation (Sunell et al., 2008, p. 28). Dental hygiene governing bodies also regarded the development of common competency language as essential to establishing interprofessional communication and resulting in capacity building within the dental hygiene profession. As Sunell et al. state:

The articulation of core competencies is also expected to lead to an understanding of the competencies shared by all health professionals. It is expected to support interprofessional education initiatives given that a major barrier to such education is the lack of understanding of shared competencies. Ultimately the core

competency profile is designed to help build the capacity of dental hygienists to support the oral health needs of the Canadian public (p.28).

These governing bodies organized meetings and conferences with the intention of developing national dental hygiene competencies and standards.

The current National Competencies document contains two parts: Part A, the national competencies to be used by educators in developing curriculum, and Part B, the national standards that outline the practice standards overseen by regulatory authorities (Canadian Dental Hygienists Association, 2010a). The national competencies in Part A outline the foundation of knowledge, skills, and attitudes required to practice in the dental hygiene profession across Canada (CDHA, 2010a). While documentation of the development of these competencies described the process as collaborative, almost all dental hygiene educators were not included during this stage (CDHA, 2010b; Sunell et al., 2008). Educators were not the major drivers of this initiative nor did they set the agenda. Despite these facts, the educators were identified as one of the key members doing the “bulk of the work” in implementing and evaluating these competencies (CDHA, 2010b, p. 5).

The first dental hygiene competencies were developed in the 1980s. These reflected mainly technical and clinical skills (Sunell et al., 2008). At that time, the competencies taught in dental hygiene education programs were based on regional provincial standards (CDHA, 2010b). Dental hygiene regulatory authorities who were overseeing these education programs recognized a need to develop one standard on a national level (CDHA, 2010b). Given that the idea for the development of the National Competencies was initiated from the Board of DHEC, in June 2006 a meeting with the

national dental hygiene organizations took place followed by a second meeting in September 2006 (Sunell et al., 2008, p. 30). From these two meetings, a Project Planning Committee (PPC) was established with members from the following national dental hygiene organizations: Canadian Dental Hygienists Association (CDHA), Commission on Dental Accreditation of Canada (CDAC), DHEC, Federation of Dental Hygiene Regulatory Authorities (FDHRA), and National Dental Hygiene Certification Board (NDHCB).

Development of the National Competencies took place in three phases. Phase 1 included a 3-day workshop in February 2007, with 22 “key informants from the dental hygiene profession” (Sunell et al., 2008, p. 30). These key informants created the initial competency statements (CDHA, 2010b). Phase 2 consisted of a national web-based survey for participants’ recommendations on the competency statements. Phase 3 consisted of a “focus group” where comments were collected to “shape the final version of the *National Competencies*” (CDHA, 2010b, p. 3). Participant recruitment criteria or identifiers were not disclosed for those selected in each of the three phases.

The current National Competencies are comprised of 116 competencies, divided into eight domains organized within two broad categories: “1) Core Abilities — reflecting abilities common to the provision of all dental hygiene services but also common to other health care professionals; and 2) Dental Hygiene Services — specific abilities related to specialized services provided by dental hygienists” (CDHA, 2010b, p. 8). Specifically, the Core Abilities identify and describe the dental hygienist as a professional, a communicator and collaborator, a critical thinker, an advocate, and a

coordinator. The Dental Hygiene Services identify and describe the dental hygienist as a clinical therapist, oral health educator, and health promoter (CDHA, 2010b).

The National Competencies were recognized as an “academic document” whereby the dental hygiene educators were expected to use these competencies in the development and teaching of their college’s curricula (CDHA, 2010b, p. 4). The dental hygiene educator community is diverse in regards to teaching environments, educational backgrounds, and experience. With respect to the teaching environment, the national dental hygiene entry-to-practice programs consist of 2-year and 3-year diploma programs, several baccalaureate degree-completion programs, and one 4-year entry-to-practice baccalaureate program (Kanji, Sunell, Geertje, Imai, & Craig, 2010). With respect to educational backgrounds and experience, the CDAC reviews and regulates the educational requirements of all Canadian dental education, including the credentials of dental hygiene program educators. The 2011 Accreditation Requirements for Dental Hygiene Programs mandated by the CDAC states: “The program competencies must reflect the elements of the dental hygiene process of care...and address the national dental hygiene competencies as defined in the Entry-to-Practice Competencies and Standards for Canadian Dental Hygienists” (p. 13). The CDAC requirements are mandated nationally on all dental hygiene education institutions. Therefore, the CDAC has equal expectations of all dental hygiene colleges and educators across Canada despite their diversity. However, the current dental hygiene accreditation requirements do not identify the specific credentials that affiliated educators must possess. The CDAC (2011) mandates that: “Dental hygiene faculty members who are assigned didactic, preclinical, and clinical theory instructional responsibilities must show evidence of successful

completion of formal training in educational theory and methodology” (p. 21). In effect, dental hygiene educators are not required to possess a university degree level of education, and may pursue other education training including; for example, certificates from recognized colleges.

Since the founding of the first Canadian dental hygiene 2-year diploma program at the University of Toronto in 1951, dental hygiene education in Canada has significantly changed in its education model (Kanji, Sunell, Boschma, Imai, & Craig, 2011). In the late 1990s, the Canadian Dental Association (CDA) was concerned that there were not enough dental hygienists in Canada to meet the needs of dental offices; therefore, the CDA pressured the provincial dental hygiene regulatory bodies to allow the opening of more diploma-level colleges, including private business schools (Kanji et al., 2011, p. 243). The regulatory body in British Columbia further amended their bylaws to allow graduates from nonaccredited programs, and to permit practicing dental hygienists and graduates from other provinces to practice in British Columbia. Kanji et al. (2011) recognized that this interprovincial practice, despite different entry-level dental hygiene education (degree and diploma), further supported the need for one national standard of entry-to-practice competencies.

Since the publication of Kanji et al.’s article in 2011, all nonaccredited colleges were closed due to mandated changes by provincial ministries. This number was most significant in Ontario, where there are now 18 dental hygiene colleges remaining from the 39 colleges present only a few years ago, and all 18 colleges are accredited by the CDAC (Commission on Dental Accreditation of Canada [CDAC], 2015; National Dental Hygiene Certification Board [NDHCB], 2012, p. 7). The province of Ontario currently

has only diploma credentialing dental hygiene colleges. The CDHA conducted an Educator's Survey in 2014 sent via their Educator Members' Listserv and received responses from 121 educators from across Canada, representing a response rate of over 46%, with 51.2% of the respondents working in Ontario. In the CDHA Educator's Survey Report (2014), the highest level of dental hygiene education was identified as the diploma: 57.9% of all educators. "The dental hygiene diploma is the most common highest level of completed dental hygiene education among educators" (CDHA, 2014, p.18). However, the Bachelor's degree outside of dental education was completed by 35% of all survey respondents, followed by a Master's degree 27%; with studies in education being 15.7% at the Bachelor level and 23.1% at the Master's level (CDHA, 2014). Evidently, dental hygiene educators across Canada do not possess equal educational training and qualifications.

The Problem Context

The challenges that dental hygiene educators face in building personal capacity is exacerbated by their absence during the developmental phase of the National Competencies. As a dental hygiene educator and administrator during these stages, I have personal insight into this predicament. The diversity of educators' credentials and teaching environments were not factored into this curriculum reform. Furthermore, no initiative was made in order to train all educators so they may implement and evaluate these competencies in their teaching in order to achieve the national standard as mandated by dental hygiene governing leaders. Given that the National Competencies curriculum reform mandated the incorporation of these competencies into all Canadian dental hygiene college programs by 2013, instructors, myself included, were compelled

to take their own initiative to build the required knowledge, practice, and self-awareness to successfully teach and evaluate these competencies.

Governing leaders identified the need for a common national standard and the collective development of the National Competencies. As Sunell et al. (2008) state: “This is a collaborative project involving all interest groups as equal partners, and it represents the first such collaboration in Canadian dental hygiene profession ” (p. 30). In 2007, a Project Planning Committee (PPC) was established for the Phase 1 Workshop and included dental hygiene members of education, associations, and regulatory authorities who developed the National Competencies. “Workshop participants were assigned to a working group based on their practice experience and *knowledge* [emphasis added]” (Sunell et al., 2008, p. 31). The web-based survey described in Phase 2 had participants selected on the “recommendations of the national dental hygiene organizations involved in the project” (Sunell et al., 2008, p. 30). The Phase 3 focus group did not identify the participants who assessed the data from the survey. The development of the National Competencies was described as a collaborative project. However, the 22 key informants identified in the development of the National Competency document only included 12 educators, with unequal representation from the provinces involved (Sunell et al., 2008). The criteria and process of selecting these key educator informants were not publically disclosed. Therefore, there is no indication of the extent to which these educator informants were representative of general dental hygiene educators across Canada. Given the small number of key informants selected, dental hygiene educators were predominantly missing in the development of the National Competencies. Furthermore, the dental hygiene educators have not been provided a

means to report their experience and opinions of the development and implementation of the National Competencies.

Dental hygiene educators who do not have a baccalaureate education or higher were further disadvantaged in implementing and evaluating the National Competencies reform as they lacked university-level skills and knowledge. As Kanji et al. (2010) note: “According to more general literature regarding experiences in higher education, baccalaureate education is designed to educate broadly and liberally, producing graduates who are proficient critical thinkers, communicators, problem solvers, and decision makers” (p. 149). According to the CDHA (2014) Educator’s Survey Report, the majority of educators, especially in Ontario, completed the diploma level of dental hygiene education. Christie, Coun, Bowen, and Paarmann (2007) identify the importance of faculty development to enhance skills in evaluation of competency-based education. Hendricson et al. (2007) contend that “the success of educational reforms ultimately lies with individual instructors and their capacity, individually and collectively, to implement ‘new ways of doing things’ during their day-to-day, hour-by-hour, moment-by-moment interactions with students” (p. 1514). The purpose of developing the National Competencies was to have one document to unify dental hygiene education across Canada (Jamieson, 2010). Given that dental hygiene governing leaders dismissed the educators during developmental stages of the National Competencies, these leaders further dismissed the individual capacity of the instructors to design, implement, and evaluate these competencies.

To date, there has been no inclusive collaborative project for dental hygiene educators to implement or evaluate the National Competencies. The development of the

National Competencies was to have “one common national standard for Canadian Dental Hygiene education, accreditation, examination, & regulation” (Jamieson, 2010, p. 5). As in many education organizations, current dental hygiene education in Canada indicates a hierarchal structure. This top-down flow of power compromises communication and transparency between dental hygiene governing leaders and educators, which impedes the success of school reform. In a case study that described how a single dental school implemented a reform to build a learning organization, Frankl and Gibbons-Carr (2001) exemplify that “organization less dependent on dean-driven or top-down change and more capable of fully using the talents of all members of the school community would ultimately be able to respond better to its changing environment” (p.1254).

Unfortunately, their advice was not followed in this reform project. Dental hygiene educators received no formal training or faculty development from leaders to implement and evaluate the National Competencies in their teaching.

Dental hygiene governing leaders also failed to communicate with educators how curriculum reform goals will improve their practice and student learning. Wilkerson and Irby (1998) contend:

The goal of faculty development is to empower faculty members to excel in their role as educators and in so doing, to create organizations that encourage and reward continual learning. Educational leaders and professional faculty developers share the responsibility for creating and promoting a shared educational mission and shared values, for actively involving the faculty in decision making related to education, for providing opportunities for teaching

improvement, and for shaping the systems for evaluating and rewarding teaching.
(p. 393)

Given that no formal training was provided to all dental hygiene educators for the reform, it is unknown if educators possess the knowledge or qualities for successful implementation and evaluation of the National Competencies. As Spallek, O'Donnell, and Yoo (2010) state: "Change requires the willingness to change and knowledge of the domain in which you want to change" (p. 281). These authors assert that student feedback is useful to identify areas for change and teaching improvement. In a study that investigated dental hygiene students' perceptions of effective teaching behaviours, Schonwetter, Lavigne, Maurat, and Nazarko (2006) demonstrated that a link exists between instructor practice qualities and student achievement. Consequently, if Ontario educators' training was limited during the National Competencies reform, so will be student learning outcomes.

The human aspect of reform was dismissed by dental hygiene governing leaders. Evans (2001) identifies instructors as the people behind reform, and argues that the personal side of the change must be considered to achieve a successful reform. He explains,

Overlooking and underestimating the human and organizational components of change has routinely sabotaged programs to improve our schools.... If we have learned nothing else from these efforts, it should be this: no innovation can succeed unless it attends to the realities of people and place. (Chapter 6, Section 1, para.1)²

The contribution of members is essential to the success of implementing organizational

²This citation convention follows APA (2009) standards for citing online sources.

change. As Senge (1990) states, “An organization's commitment to and capacity for learning can be no greater than that of its members” (p. 7). The resistance of educators is a potential predicament of the externally mandated reform on the dental hygiene educators. As Capra (2002) notes, “It is common to hear that people in organizations resist change. In reality, people do not resist change; they resist having change imposed on them” (p. 100). Although the personal side of reform was dismissed by leaders, dental hygiene educators should have the opportunity to recognize their position in teaching and evaluating of the National Competencies. Building self-awareness during this reform would be an important step in developing their personal capacity.

Purpose of the Study

The purpose of this study was to investigate how dental hygiene educators build personal capacity as they implement and evaluate the new curriculum. The overarching question was: How do dental hygiene educators in Ontario describe the task of building personal capacity to implement and evaluate the National Competencies?

Given that personal capacity identifies knowledge, learning, values, assumptions and beliefs, and teaching of individuals of a learning community (Mitchell & Sackney, 2006, 2011), the indicators for building personal capacity in this framework of this study were: building knowledge, building practice, and building self-awareness.

Empirical subquestions narrowed the focus of the central question and provided specificity to develop interview questions for the study (Creswell, 2011). In this study, the subquestions pertained to the indicators of personal capacity. They were as follows:

1. How do dental hygiene educators describe the task of developing the knowledge to implement and evaluate the National Competencies?

2. How do dental hygiene educators describe the task of developing the practice to implement and evaluate the National Competencies?
3. How do dental hygiene educators describe the task of developing self-awareness to implement and evaluate the National Competencies?

Conceptual Framework

Drawing from the capacity-building model described by Mitchell and Sackney (2011), a conceptual framework was developed to investigate how the National Competencies curriculum reform has impacted dental hygiene educators' personal capacity (See Figure 1). The chosen indicators of knowledge, practice, and self-awareness were included in the conceptual framework as they provided a useful set of elements to be explored. To date, there have been no publications on dental hygiene educators' personal perspectives of this curriculum reform, nor have they been given the opportunity to publically voice their experiences. This conceptual model framed the opportunity to provide that voice to dental hygiene educators. As Mitchell and Sackney (2011) state, "A capacity-building model gives educators voice and presence in the process. It affords spaces for them to take up the challenge 'not just to transform practice, but to restructure basic assumptions about learning and learners'" (p. 50).

Importance of the Study

Dental hygiene educators were predominantly dismissed during the development phase of the National Competencies document. Now these educators are responsible for implementing and evaluating the National Competencies in their teaching. As the National Competencies document states, "All dental hygiene educators are required to teach to the basic level of the competencies as outlined. Educators and researchers are

free to enhance the competencies as required” (CDHA, 2010a, p. 3). Given the diverse training of dental hygiene educators, competence in teaching the mandated competencies can be expected to vary. Furthermore, no collaborative initiative occurred to promote interprofessional discourse on how to implement and evaluate this curriculum reform. This study provided educators an opportunity to develop personal capacity as they discussed and analyzed their ability to build knowledge, practice, and self-awareness during the reform. This research also initiated interpersonal and organizational capacities among dental hygiene educators as participants reflected on influences of other members in their learning community. By exploring Ontario dental hygiene educators’ experiences during the reform, this study offered an opportunity for educators to communicate.

This research provided an alternative approach in exploring educators’ perspectives. This study also offers dental hygiene governing leaders insight into how they influenced educators, and how educators managed the current reform.

Improved educator capacity to implement and evaluate the National Competencies may also have a positive and valuable impact on the learning experiences of dental hygiene students. During the development phase of the National Competencies, the dental hygiene graduates were the main focus. Sunell et al. (2008) describe this process:

What do new graduates need to know and be able to do to provide the appropriate dental hygiene services for the Canadian public? This parameter was frequently reinforced and discussed during the workshop; it made the work more challenging as every item needed to be orientated to this entry-to-practice criterion. (p. 32)

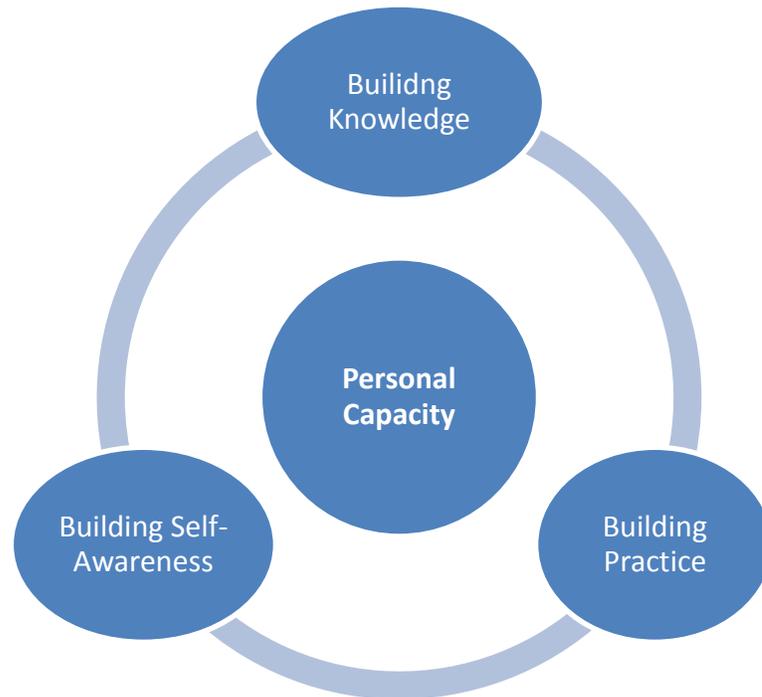


Figure 1. Conceptual Framework for Dental Hygiene Educator's Personal Capacity Building.

Although the importance of the dental hygiene educators was not acknowledged by governing bodies, it is the educators who are responsible to teach and evaluate the required competencies and skills that students must achieve upon graduation from their program in order to successfully pass their National Board Exam (Lavoie, 2012). “These statements do not reflect the intentions and hopes of educators; they are intended to be entry-to-practice competencies which graduates of dental hygiene programs must reliably demonstrate” (Sunell et al., 2008, p. 29). By describing dental hygiene educators’ perception of how they may build personal capacity to implement and evaluate the National Competencies, this study can have a positive and valuable impact on the learning experiences of dental hygiene students.

Organization of the Remainder of the Document

This chapter has identified the background and problem context of this study. It presented the purpose and conceptual framework with chosen indicators for building personal capacity. These guided the investigative component of this study and justified pursuing this research.

Chapter Two outlines the literature related to the purpose and direction of the study. This chapter reviews the literature that supports the conceptual framework for building personal capacity and that structured the instrumentation for data collection in this study.

In Chapter Three, the methodology and research design are outlined as well as the methods of data collection and analysis. The credibility of data is established and ethical considerations, assumptions, and limitations of the study are described.

Chapter Four presents the findings of this study. The study yielded major and minor themes that emerged from data analysis, which revealed a framework that represents the perceptions of the educator participants for building personal capacity.

Chapter Five concludes the report with a summary and discussion of key findings of the research. This chapter outlines the implications for educators building personal capacity in their practice and suggests future opportunities for research into this phenomenon. It concludes with final thoughts and suggestions.

CHAPTER TWO: REVIEW OF THE LITERATURE

This section provides a review of relevant literature that identifies aspects of capacity building in educational organizations and the role of the educators in capacity building. This literature review was organized to identify capacity building for (a) school reform, (b) a learning community, and (c) curriculum reform. The last section describes personal capacity building for Ontario dental hygiene educators. Throughout these sections, the literature will be reviewed with respect to three elements of personal capacity building chosen for the conceptual framework for this study as identified by Mitchell and Sackney (2011): building knowledge, building practice, and building self-awareness.

Capacity Building for School Reform

Building capacity is essential to successful school reform. Zimmerman (2008), for example, states: “While educational leaders can choose various approaches to accomplish the task of school reform or redesign, no matter which framework is employed, attention to building capacity is significant to the success of the effort” (p. 9). Zimmerman cautions that school leaders are responsible for guiding members of their organization during the reform. She states:

When embarking on any reform effort, school leaders need to recognize that the success of implementation may be subject to many variables....Therefore, today’s superintendents and other school leaders are obliged to prepare to lead change, understand the process and nature of change, and provide the essential support so that those involved in change can be successful. (pp. 9-10)

Zimmerman defines capacity building as the “process that takes people from where they

are to where they need to be in order to think and act in systems terms” (p. 9). She suggests that “systems thinking” is required by educational leaders in order to build capacity during reform, and adds that “another key to building capacity, with systemic programs...is providing support that is linked to the characteristics of educators within the learning community” (p. 10).

According to Senge (1990), systems thinking focuses on the interconnectedness and relationships of people that make the organization a living system, where each system is the unique result of its members. In systems thinking, Senge explains, the organization does not progress in a traditional hierarchal format where learning is directed from the top, but that all persons at all levels are committed to learning:

It's just not possible any longer to "figure it out" from the top, and have everyone else following the orders of the "grand strategist." The organizations that will truly excel in the future will be the organizations that discover how to tap people's commitment and capacity to learn at all levels in an organization. (p. 4)

This phenomenon requires the breaking of the traditional top-down organizational structure so as to accommodate the learning community. As Frankl and Gibbins-Carr (2001) state, “systems thinking means that the organization looks at problems and goals not as isolated events but as components of a larger structure” (p. 1255). In their study of a single dental school grappling with organizational change during a school reform, Frankl and Gibbins-Carr encourage the systems thinking approach as they support the notion of a “school without walls” to ensure the success of the organizational change. They explain that a school without walls

had to change its organizational structure from a predominantly vertical, hierarchical orientation (where control and regulation are high while power is symbolized by title, rank, and privilege) to one that was more horizontal (where ability is more important than status). This change was accomplished by altering how people and departments inside the school related to one another and by increasing partnerships and alliances with external organizations. (p. 1258)

Evidently, the school without walls strategy not only requires a structural change but also a change within the members of the organization. However, Frankl and Gibbons-Carr caution about the challenges of changing people and their deeply ingrained assumptions. “When we are used to seeing something a certain way, we can be captive to our own thought processes and miss a great deal. Trapped in our own mental models, we become prisoners of our particular view of the world” (p. 1255). Senge (1990) similarly contends that changing these mental models is one of the most challenging aspects of organizational transformation.

Governing leaders play a significant role in school capacity building. Stoll, Bolam, and Collarbone (2002) address the challenges that leaders face in dealing with externally mandated change while implementing school learning initiatives: "At the local level, however, restructuring poses school leaders with a potent dilemma: how to manage the implementation of an onerous external change agenda while simultaneously promoting school-initiated improvements that enhance their schools as learning organizations" (p. 43). The school leader is identified as the key stakeholder for this change. Examining the issue from the perspective of international reform initiatives, Stoll et al. further describe the role of the leaders in transforming their schools to meet

the mandated change. “The reforms have undoubtedly transformed the culture of schools in these nations” (p. 45). Stoll et al. define the school as a learning organization where both instructors and students learn. “In a learning organization, teachers, as well as students, are regarded as learners who contribute to ongoing school improvement” (p. 50). The authors describe dilemmas that may occur when learning initiatives are centrally imposed. In such reforms, sometimes “teacher needs can conflict with other policies” (p. 5). In this case the authors support the top-down paradigm for learning in schools. Stoll et al. state, “If school leaders are to have the capacity to resolve such dilemmas, it is essential that they focus on promoting professional learning as fundamental to the change process” (p. 50). As part of the same process, the authors describe how leaders manage change. “Leaders are continuously faced with the necessity of helping others to see the reason for change, deal with it, manage it where necessary, and, within the school, actively take charge of it” (p. 5). Again, however, Stoll et al. fail to take into account the instructors’ perspectives of the externally mandated change process. The authors refer to building capacity but have described a bureaucratic management form of implementing change with no input from or collaboration with educators.

Mitchell and Sackney (2006) describe practices that were used by school principals for capacity building in their research schools. Practices such as constant flow of communication across all stakeholder groups were noted as building strong school capacity (p. 632). The principals were also described as facilitating knowledge management with teachers: “They provided opportunities for teachers to inquire and generate ideas together, to reflect and make sense of their work, and to construct new

actions from new understandings” (p. 633). Principals held meetings to facilitate discussions with teachers on: “What was working well, what was consistent or inconsistent in the school, and where changes were needed to enhance student engagement and achievement” (p. 635). While Mitchell and Sackney (2006) acknowledge that the focus on the school principal is controversial, they propose that success of a learning community is dependent on the presence of a “powerful administration” in building a learning community (p. 638). Mitchell and Sackney (2006) did observe the interaction of educators with the principals in these high capacity schools. However, the study did not focus on educators’ perceptions of building capacity in their learning communities.

Members of an organization are the drive behind reform. Evans (2001) states, “Change is a generative process; it must be accomplished by people” (Intro, para 4). However, Evans also acknowledges the leaders in directing the reform and promoting the purpose for change. “It is now widely accepted that a clear sense of purpose is vital to productivity and especially to innovation, that leaders invigorate performance and inspire commitment to change by engaging their people in the pursuit of shared goals” (Part 1, Section 5, para. 6). He further identifies the leader’s role in encouraging collaboration among faculty during reform. The leader is not to enforce change on the faculty but to work with faculty and to address issues with clarity. In order to accomplish this, the leader must be authentic. As Evans explains, “Most of us seek in a leader this combination of genuineness and effectiveness. It makes him [*sic*] authentic, a credible resource who inspires trust and confidence, someone worth following into the uncertainties of change” (Chapter 9, Section 1, para. 4). In spite of the initiatives of the

authentic leader, Evans warns that the leader's actions may cause some faculty to resist change.

A leader may be sincere about his goal and unaware that his behavior is contradictory....In such cases, the leader may seem "out of it" and incompetent more than cynical or manipulative, but he will still invite disrespect and resistance instead of followership. (Chapter 9, Section 2, para. 1)

Despite Evans' attribution of reform initiatives to authentic leaders, he describes the real change as being made by the people behind the reform: the educators. While he cautions not to avoid resistance, he does not provide solutions especially for those educators who resist the reform due to their values, assumptions, and beliefs in their teaching.

Evans (2001) fails to discuss the impacts of educators' self-awareness on their compliance or resistance in directing reform initiatives. Cohen and Tedesco (2009) also fail to provide solutions for these issues. They present educators' resistance as a reaction to fear of loss, and caution educational leaders to address this through adaptive leadership. They explain that traditional leadership in dental education views change through a "technical lens" with quick-fix solutions:

We have been oriented to view leadership through a *technical* lens: here is the problem; this is what we need to do about it. Technical problems can be solved through the knowledge of experts and senior authorities. We are accustomed, indeed well trained, to define or diagnose a case that solves the problem presented. We also would like to be able to "fix" the challenges/problems facing dental education through the application of our existing knowledge and expertise.
(p. 4)

Cohen and Tedesco recognize that many challenges during education reform do not have a clear answer and cannot be resolved by technical “quick-fix” solutions. They contend that adaptive leadership provides the best guidance for dental education reform.

Adaptive leadership prompts school leaders to appraise the self and taps into their values, beliefs, and ways of being. This method promotes school reform through the leader’s observation of the organization as a system rather than as a group of individuals, and acknowledges the embedded values of all members involved in the change and possible responses to the reform. Cohen and Tedesco contend that without adaptive leadership, conflict and the fear of loss will overcome progress. They offer that leaders must engage with their stakeholders to communicate effectively. “Because of resistance to loss, creating an environment in which others begin to engage becomes essential. To exercise leadership, we must communicate an optimistic and shared vision centered on an orienting purpose” (Cohen & Tedesco, 2009, p. 8). However, like Evans (2001), Cohen and Tedesco place the accountability of implementing a successful reform on the school leaders, not on educators.

In a managed education system where change is mandated, and not conducted in collaboration with members, leaders influence the personal capacity building of educators. Spillane and Thompson (1997) identify the leaders’ influence of capacity building during curriculum reform. They further identify challenges teachers will face with knowledge building during the reform: “Most teachers will have to unlearn much of what they already know as well as learn new things” (p. 186). Spillane and Thompson also define the role of teachers’ personal capacity. “Teachers’ knowledge, beliefs and experiences will also influence how and what they learn from the opportunities mobilized

by district leaders” (p. 186). While some consideration is given to educator learning during reform, the learning initiatives are credited to the local leaders.

However, Spillane and Thompson (1997) do identify the importance of collaboration between leaders and educators during reform. In their study, they found some key factors that deterred the learning of educators, such as the (a) lack of trust, (b) tensions between educators and administrators, (c) collaboration breakdown due to lack of trust between educators, and (d) demands for learning imposed on educators. These aspects all led Spillane and Thompson to broaden the notion of local capacity. They state, “Our conception of capacity, then, moves beyond individual skills and knowledge” (p. 199) to include relationship aspects. Similarly, Cosner (2009) contends that the perception of trust within the organization provides individuals with a sense of safety and promotes social exchanges at school. While Cosner focuses on trust between teachers in the school, he identifies the principal as the leader who prompts and promotes collegial trust during school reform: “Consistently, these principals identified trust as a critical support for their schools’ reform work or pointed to their own trust-building efforts as an important feature of their own capacity-building work to support school wide reform efforts” (p. 265). Cosner found that trust was built through such efforts as (a) increasing the interaction time between teachers, (b) developing conflict resolution strategies, and (c) establishing and communicating processes and rules. As his study focused on the principals, Cosner recognizes that the teachers in the study schools may not share the same perspective: “One cannot conclude that teachers held consistently similar perceptions as reported by these principals or that collegial trust was developed or enhanced in each of these schools” (p. 283). With so much of the research focusing on

the leaders' role in educators' capacity building during school reform, it would be helpful to explore educators' perceptions of their interaction with leaders.

Capacity Building for a Learning Community

Mitchell and Sackney (2011) have developed a framework for the capacities required for building a learning community. This framework identifies personal, interpersonal, and organizational capacity. Given that organizational and interpersonal capacities have been disregarded during the National Competencies curriculum reform and in the dental hygiene profession in general, *personal capacity* of educators warrants further investigation. As defined by Mitchell and Sackney (2011), "In schools, personal capacity is structured by the embedded values, assumptions, beliefs, and practical knowledge that educators carry with them and by the professional networks and knowledge bases with which they connect" (p. 20). They define the concept of a learning community as "a group of people who take an active, reflective, collaborative, learning-oriented and growth-promoting approach toward the mysteries, problems, and perplexities of teaching and learning" (Mitchell & Sackney, 2006, p. 628). Their conceptual model of learning communities places educator learning at its core. As Mitchell and Sackney (2006) state: "This approach places learning at the center of school discourse and assumes that teachers do not think of teaching without also thinking of learning" (p. 628). Mitchell and Sackney (2006) describe the first domain of capacity building as "the personal capacity of individuals to learn, teach, question, reflect, and grow" (p. 628). As there is currently no literature identifying capacity building in dental hygiene education, it makes sense to begin exploration into capacity building in these learning organizations at the first domain of personal capacity.

The building of personal capacity in a learning organization is at least partly dependent on its leaders. Hargreaves and Fullan (2012) acknowledge the role of school administrators in educators' capacity building. The authors state, "The greater the capacity of teachers, the more peers become the source of innovation. Administrators work toward that goal and then do everything possible to sustain and deepen this capability in their teachers" (p. 169). Hargreaves and Fullan further note that the role of the school leader is to achieve sustainable change during curriculum reform. Stoll et al. (2002) define the role of the school leader as a "capacity builder" to develop ongoing professional learning as a system changes:

Here we argue that existing approaches to change do not sufficiently address the development of sustainable and ongoing learning. We suggest that it is the role of the leader as a 'capacity builder' that is fundamental to developing learning in a complex, changing world. (p. 41)

In organizations of a larger scale, such as colleges and universities, observing the role of the leaders and their impact on faculty in these settings may be challenging. In this case, the distribution of leadership among faculty is essential to build a learning community especially during curriculum reform. Hargreaves and Fullan (2012) contend that leaders and educators alike must engage in creating a successful school reform:

The basis of any successful large-scale reform, then, is going to be built on shared experiences, trusting relationships, and personal and social responsibility, as well as transparency. What pulls people in, teachers all the more so, is doing important work with committed and excited colleagues and leaders engaged in activities that require creativity to solve complex problems and that make a real

difference. Obstacles are expected, but they inspire determination rather than inflicting defeat. (p. 151)

Hargreaves and Fullan also contend that social relationships among members of an organization are needed for knowledge access, for what they refer to as “social capital” (p. 90). Despite their support for distributed responsibility among educators and leaders, they place the task of achieving this relationship on the school leader:

Stable and sustainable (not stagnant and stale) leadership does not drag a school or a system from one initiative to another, condemning its educators to manic depressive mood swings rather than consistency of orientation and focus. It goes beyond politics and short-termism to build long-term professional capital across whole cohorts of teachers, develop social capital among them as communities, establish trust with the teachers and schools they know well, and guide teachers and leaders through their careers as professionals and as people. (p. 167)

Hargreaves and Fullan (2012) also identify collaboration as a critical element of school capacity. They provide examples of peer mentoring and advising between principals and teachers for this purpose; yet, their framework for leadership is a hierarchal structure with the leaders on top. Their description of “systems” refers to a system of all schools in the district and does not relate to the inclusive “systems” as described by Senge (1990). Rather, Hargreaves and Fullan credit the school leaders with the responsibility of ensuring the social change required for successful school reform:

We are at a new crossroads in educational reform, let us remember, and the solutions can go either way— getting tougher on teachers, or figuring out how to realistically develop a profession that becomes more inspiring, tough, and

challenging in itself. This still requires leadership, but it is the kind of leadership that reconciles and integrates external accountability with personal and collective professional responsibility. It is the leadership that focuses on developing teachers' professional capital— as individuals, as teams, and as a profession. (p. 46)

Evidently, Hargreaves and Fullan describe the task of building capacity for a learning community from a technical perspective where leaders still play a significant role in driving this change.

In systems thinking, Senge (1990) recognizes the value of “team learning” where organizational meaning is identified as knowledge is built. He explains that this task is accomplished through collaboration and communication, or “dialogue,” among members of the organization:

The discipline of team learning starts with “dialogue,” the capacity of members of a team to suspend assumptions and enter into a genuine “thinking together.” To the Greeks dia-logos meant a free-flowing of meaning through a group, allowing the group to discover insights not attainable individually. (p.10)

Senge proposes that successful team learning is imperative to organizational learning: “Team learning is vital because teams, not individuals, are the fundamental learning unit in modern organizations. This where ‘the rubber meets the road’; unless teams can learn, the organization cannot learn” (p. 10). Senge expects all members of the organization, not just leaders, to accomplish this task. Frankl and Gibbons-Carr (2001) concur with Senge’s requirements of collaboration and communication for building a learning community. They further denote that collaboration efforts from all members of the

learning community are essential for a successful school reform as this acknowledges each member's knowledge. In contrast to Hargreaves and Fullan (2012), Frankl and Gibbons-Carr identify organizational structure as deterrence to knowledge building and suggest removing these barriers to achieve a learning community. When describing collaborative meetings, such as conferences in a learning community, Frankl and Gibbons-Carr explain, "The process works by temporarily removing structural barriers of position and status. All participants work together as peers and equals, which delivers the message that everyone is knowledgeable and has something valuable to contribute" (p. 1259).

The dismissal of educators' knowledge during school reform deters their capacity building. As Mitchell and Sackney (2011) state: "Teachers are resourceful, and most of them welcome constructive help and suggestions for improvement, but if their prior knowledge is discounted and their voices are marginalized or ignored, then their worth is devalued and resistance is likely" (p. 49). Evidently, school leaders can help build educators' capacity by distributing leadership during curriculum reform and by acknowledging the educators who implement and evaluate the change.

Capacity Building for National Dental Hygiene Curriculum Reform

In Canada, a national mandated curriculum reform has been imposed equally on both diploma-granting and degree-granting colleges. The reform mandate does not take into account the diverse education and training of educators in these different credentialing colleges. The CDHA (2010b) acknowledged the challenges that would be faced by college educators during the reform: "It is highly probable that the curriculum in dental hygiene degree programs have all the national competencies already incorporated.

Diploma programs on the other hand will be challenged in meeting the competencies without significant changes to the existing programs" (pp. 13-14). Despite the diversity of dental hygiene education and associated challenges, Sunell et al. (2008) support the National Competencies reform and state that "the profile has the potential to be a positive force to support greater consistency of educational, and possibly regulatory, standards across Canada" (p. 34). Kanji et al. (2011) rather argue that this standardized document, the Entry-to-Practice Competencies and Standards for Canadian Dental Hygienists, is *not* a solution for dental hygiene education reform: "Educational reform for the profession will require more than simply the creation of documents and discourse. Research on outcomes of higher education on dental hygiene services is needed" (p. 248). Kanji et al. (2011) support a national unified entry-level dental hygiene education at the baccalaureate level as this provides enhanced knowledge and practice building:

Dental hygiene baccalaureate degree education in Canada provides a broader education, a more independent learning environment and a stronger focus on *critical thinking* [emphasis added]... Longer educational programmes, in general, have been shown to support the development of greater abilities in the use of research and critical thinking that have been found to result in improved client outcomes. (p. 244)

No publication to date has explored if and how diverse educational training and knowledge affects building personal capacity in learning communities.

Providing opportunities for educator collaboration is essential to building capacity during school reform. Mitchell and Sackney (2011) identify collaboration in promoting individual capacity for autonomy as each member of the organization must "self-

organize, self-manage, and self-regulate in response to specific tasks” (p. 72). This promotes capacity building as members of the learning community develop a sense of commitment to completing the required task. Mitchell and Sackney (2011) explain:

If the capacity for autonomy and emergence exists, then teams can be expected to make good decisions that are likely to be supported and implemented by the community. This argument is essentially one of empowerment: when people have control over the conditions of their work, they are more likely to respond effectively to questions of professional practice and to support and fulfill the institutional obligations to which they are committed. (p. 72)

School leaders are recognized as the guiding force behind collaboration in school organizations. Zimmerman (2008) asserts, “School administrators can develop a supportive culture for change by providing opportunities for teacher collaboration and participation in decision making” (p. 10). However, this is not always the case in mandated reforms. In a CDHA webinar by Jamieson (2010), the “major stakeholders” were identified as competency developers, while the actual dental hygiene educators were only acknowledged in the implementation stages. During the question and answer period at the end of the webinar presentation, an attendant asked about the support for educators in implementing the National Competencies. Jamieson responded that she would “like to suggest to do it collaboratively” and further suggested an “online forum for educators.” To date, there has been no publication supporting an inclusive practice-building initiative for educators. This gap is an issue for implementing a national curriculum reform because, as Evans (2001) notes: “None of these changes can be accomplished to any significant degree by teachers who simply try to tolerate them or who ‘go along’

passively; all require active commitment and participation on the part of teachers” (Chapter 4, Section 2, para.1).

Hendricson et al. (2007) also identify educator inclusion and training as essential to a successful curriculum reform. They argue that instructor training and knowledge contributes to the development of curriculum reform in dental education. Without these entities, Hendricson et al. claim that curriculum changes mandated by school officials are not always put into teaching practice. They explain, “The barrier appears to be lack of awareness and/or lack of capacity among faculty to implement appropriate teaching/learning strategies” (p. 1522). Explaining further, the authors note that the hierarchical structure of the organization has school leaders who “initiate” the reform and a few recruited faculty leaders, referred as the “inner circle,” who mandate the reform. In this model, the “outer circle” that makes up the faculty who are to implement the reform are excluded from the initiation and development phases, which leads to problems with implementing the reform. Hendricson et al. describe this predicament:

After a planning process behind closed doors that may span many months to several years, the new routine is ultimately unveiled for use by other individuals in the organization, who typically are not well informed about the new approach and, in fact, may be caught off guard (surprised) by the unveiling of this new approach. This stage involves resolution of problems that arise during first implementation attempts by individuals, called the outer circle, who were not involved in planning and who may not share the assumptions, enthusiasm, or skills of the inner circle and thus may experience difficulties and associated

frustrations in using the new routine, particularly in the absence of training. (pp. 1522-1524)

Providing a voice to the “outer circle” participants is one way to overcome the difficulties and associated frustrations when implementing a mandated reform.

The absence of dental hygiene educators also impedes the identification of shared values and vision for the learning community and, as a result, deters capacity building. Cohen and Tedesco (2009) assert that school leaders should inspire a shared vision for change: “To exercise leadership, we must communicate an optimistic and shared vision centered on an orienting purpose” (p. 8). Zimmerman (2008) also acknowledges the leader’s role in achieving a shared vision, which is needed for a successful school reform. She states: “Critical to the success of any reform initiative is the sense of common purpose that leaders promote by involving others in developing and communicating a shared vision” (p. 8). Wilkerson and Irby (1998) describe the task of identifying shared values as accomplished by leaders and faculty for the purpose of an inclusive learning community where educators are empowered to learn:

Educational leaders and professional faculty developers share the responsibility for creating and promoting a shared educational mission and shared values, for actively involving the faculty in decision making related to education, for providing opportunities for teaching improvement, and for shaping the systems for evaluating and rewarding teaching. (p. 7)

Senge (1990) describes inclusive systems thinking as an essential component to developing a shared vision that leads to organizational progress:

Vision without systems thinking ends up painting lovely pictures of the future with no deep understanding of the forces that must be mastered to move from here to there. This is one of the reasons why many firms that have jumped on the "vision bandwagon "in recent years have found that lofty vision alone fails to turn around a firm's fortunes. Without systems thinking, the seed of vision falls on harsh soil. (p. 12)

Whether leader-driven or a result of systems thinking, the organization's capacity for change is dependent on all members identifying a collective vision that empowers their participation in the desired change. As Frankl and Gibbons-Carr (2001) state, "While strong leadership is important, no change can occur without willing and committed followers" (p. 1255).

The dismissal of educators during the development of a curriculum reform could adversely affect the desired outcomes for building capacity in a learning community. Even if the reform identifies the importance of building capacity, as in the National Competencies document, the actual capacity type and indicators of such are not identified. This gap reflects Mitchell and Sackney's (2011) observation: "One of our frustrations with the educational discourse is that scholars often speak about building capacity without explicating what kind of capacity or capacity for what" (p. 15). The few publications that identify capacity building in dental hygiene only pertain to interprofessional collaboration (MacDonald et al., 2011), contributing to the health and well-being of Canadians (CDHA, 2009), dental hygiene research (CDHA, 2009), and building educational pathways for dental hygiene baccalaureate and graduate programs.

No publications to date have focused on personal capacity building of dental hygiene educators.

With externally mandated reforms, educators do not have the opportunity to reflect on personal elements that influence their teaching, which further infringes upon their ability to identify how they may build personal capacity. As Mitchell and Sackney (2011) explain: "Building personal capacity has to do with the active and reflective construction of knowledge. It begins with a confrontation with the values, assumptions, belief systems, and practices that individuals embrace. This is a profoundly personal and potentially transforming phenomenon" (p. 16). Senge (1990) describes the task of recognizing the self and one's capacity through learning:

Real learning gets to the heart of what it means to be human. Through learning we re-create ourselves. Through learning we become able to do something we never were able to do. Through learning we re-perceive the world and our relationship to it. Through learning we extend our capacity to create, to be part of the generative process of life. There is within each of us a deep hunger for this type of learning. (p. 14)

Houle and Gimas (2006) assert that self-reflection and developing knowledge of self is essential to building capacity. When describing how educational leaders may build capacity for ethical leadership, House and Gimas state: "The ability to rely on one's knowledge of self as a means to develop self-efficacy requires educational leaders to spend time engaged in self-reflection" (p. 13). The authors contend there should be more opportunity for self-reflective activities for both educators and students in their programs. Mitchell and Sackney (2011) identify "narrative" as a means of instructors' self-

reflecting on their professional practice:

As educators come to grips with the implicit narratives that shape and constrain their professional practice and learning, they gain a sense of what they already know and what they want to know. This knowledge empowers them to begin a search for new knowledge and to reconstruct their professional narrative.

Building personal capacity implies that, “To know is to be capable of participating with the requisite competence in the complex web of relationships among people, material artifacts, and activities.” (pp. 16-17)

Narratives are a means of appraising knowledge of self, a component to building personal capacity. Therefore, this supports the use of narratives as an investigative method for exploring the building of personal capacity.

Personal Capacity Building for Ontario Dental Hygiene Educators

Educators’ capacity building is essential to the success of a curriculum reform in a learning community as it aligns members of diverse educational backgrounds and training. As Senge (1990) states, “The organizations that will truly excel in the future will be the organizations that discover how to tap people's commitment and *capacity to learn* [emphasis added] at all levels in an organization” (p. 4). However, the National Competencies reform mandate requires that competencies must be implemented in all organizations, both degree and diploma granting, and by educators of diverse educational training. The competencies consist of clinical and nonclinical responsibilities as a professional, communicator and collaborator, critical thinker, advocate, and coordinator. Kanji et al. (2011) identify the diploma level of dental hygiene as reflecting the “clinical practice model” (p. 243). However, the authors also observe that critical thinking ability

is achieved from baccalaureate education. They do not discuss the challenge that diploma-level trained dental hygiene educators will face in their teachings. Their recommendation of dental hygienists achieving higher education will take time, as they identify budgetary, university, and political resistance. Kanji et al. (2011) recognize that “dental hygienists, therefore, need to be provided with access to educational pathways, such as baccalaureate and graduate level education, to develop their full capacity” (p. 244). Currently, Ontario only offers the degree entry-to-practice level of dental hygiene education. However, some Ontario dental hygienists have pursued higher education through distance education or in other fields of study (CDHA, 2014). The exploration of how educators’ training and access to knowledge during reforms identify how these experiences shape their building of personal capacity. As Mitchell and Sackney (2006) explain: “Through these explorations, we have identified foundational practices by which capacity is built. We have found that personal capacity is shaped by critical reflection on existing practice and by access to new professional practices” (p. 630).

A top-down flow of power compromises personal capacity building if interactions between school leaders and educators are restrictive and limiting. Mitchell and Sackney (2011) assert the importance of the interconnection between all members of the organization in building both personal and interpersonal capacity. They state: “Although the construction of knowledge is primarily a process of building personal capacity, we have found it impossible to ignore the reciprocal and dynamic relationships between the individual and the collective and between personal and interpersonal capacity” (p. 52). All aspects of dental hygiene practice are currently in a hierarchical top-down organization, though all members of the profession are not aware of this fact. Asadoorian

(2012) published a qualitative study exploring dental hygiene clinical decision making where all individuals described their organizational structure as “fairly flat” and “did not recognize a hierarchy to their practice” (p. 212). Yet, Asadoorian found that organizational factors were a key influence on dental hygiene decision making capacity. He further found that members of his focus groups identified the dentist (who is usually the practice owner) as controlling and limiting the autonomy and decision making capacity of the dental hygienists.

Leaders providing educators with practical support are essential to the implementation of a curriculum reform. Yet, this is often not the case in hierarchical organizations. VanSandt and Neck (2003) propose the practice of self-leadership to overcome the discrepancies and problems that arise in a bureaucratic organization. Given the current hierarchical dynamics of the dental hygiene profession, the educators’ capacity to provide this leadership in curriculum reform is low. As a consequence of the educators’ lack of voice and the leaders not providing training and support for the implementation of the National Competencies, resistance to this curriculum reform is probable. As Evans (2001) points out:

Change threatens people's self-esteem and their need to feel effective, valued, and in control. Technical training must meet them where they are and nurture their confidence. Explaining, training, modeling, and practicing must be more individual and intimate in proportion to the size and complexity of the change. It is an axiom of organizational development that the greater the change, the more interaction it requires. (Chapter 4, Section 3, para. 2)

Evidently, providing the educators a voice can overcome bureaucratic technical barriers

to identify their personal capacity during school reform.

Challenges with technical support during organizational change are not limited to learning communities. Tichy (1983) recognizes that business organizations contain technical systems in addition to political and cultural systems, which work together seamlessly when the organization is in good standing:

The argument is made that an effective organization is one in which there is good strategic alignment, that is, the organizational components are aligned with each other and the political, cultural, and technical systems are in good alignment with each other. (p. 47)

Tichy contends that any change during organizational transformation will ultimately result in problems in all three systems. This will require strategic management in order to resolve the problems in political, cultural, and technical systems to restore an organization in good strategic alignment. Tichy explains:

The fundamental character of their technical system will need re-examination resulting in new missions and strategies, major restructuring and revamping of the financial, marketing, production, and human resource systems. Organizations' political systems as reflected in who gets ahead, how they get rewarded, and who has power to make decisions will also need major overhaul. Organizations' cultures are perhaps the most complex and subtle yet most pervasive influence on their effectiveness. Thus, major change will require addressing issues of values and beliefs of organization members. (p. 45)

Tichy recognizes that the three systems are intertwined and, therefore, a change in one will require modification of the other three. However, he recognizes that organizational

changes in technical systems are less challenging than altering power distribution or values and beliefs of the political and cultural systems, respectively. Tichy states: “Implementation of strategy is not faltering because of technical issues, it is primarily because of political and cultural resistance” (p. 59). Hence, it is noteworthy to investigate these organizational entities and determine what educators require to overcome these dilemmas.

Chapter Summary

While no publication directly related to the National Competencies was found for this literature review, there was literature to support the investigation into perceptions of dental hygiene educators of how they may build personal capacity during their implementation and evaluation of the National Competencies. The literature provided examples from organizations of diverse fields including educational and noneducational institutions. These examples indicated that organizations predominantly exist in a top-down hierarchical structure with members at the bottom of this structure being dismissed during organizational reform. The literature describes structural influences that impede members’ access to knowledge required to implement changes during reforms. In this model, the leaders are the main stakeholders during developmental phases. However, it is recognized that nonleader members, such as educators, are the driving force behind the reform. Their dismissal results in unfavourable outcomes for the reform, as members do not have the required knowledge or training to implement the change. The conceptual framework for building personal capacity based on Mitchell and Sackney (2011) is structured around building knowledge, practice, and self-awareness. All three components must be achieved in order to build personal capacity.

Leaders were identified as playing an integral role in directing the reform and building an inclusive learning community. However, a top-down reform has been shown to have flaws and often leads to resistance from members and challenges of trust with leaders. Structural influences maintain this hierarchical state, and unless these technical barriers are broken to provide all members opportunity to build knowledge, practice, and self-awareness during the reform, then the ability to identify their needs of building personal capacity are diminished. This predicament which occurred during the National Competencies curriculum reform supports the purpose of this study. The investigative approach and methods that directed this research study are described in the next chapter.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

The objective of this study was to explore Ontario dental hygiene educators' perceptions of how they may build personal capacity to implement and evaluate the National Competencies. This chapter identifies the research design and methodology used for the study, identification and recruitment of participants, instrumentation and data collection, data analysis, credibility of results, assumptions and limitations of the study, and the researcher's worldview.

Methodology

The study followed the criteria for an interpretive qualitative study outlined by Creswell (2011): "Qualitative research is 'interpretive' research, in which you make a personal assessment as to a description that fits the situation or themes that capture the major categories of information" (p. 238). Creswell (2011) further states that "A *central phenomenon* is the key concept, idea, or process studied in qualitative research" (p. 16). Building personal capacity was the central phenomenon explored in this research. To date, no literature is available to describe dental hygiene educators' experiences with the National Competencies curriculum reform, and there is limited literature pertaining to building personal capacity for dental hygienist educators. These gaps support a qualitative study. As Creswell (2011) explains: "The literature might yield little information about the phenomenon of study, and you need to learn more from participants through exploration" (p. 16). Therefore, investigating dental hygiene educators' perspectives of capacity building during the National Competencies reform warranted a qualitative approach.

The purpose of this research was to question Ontario Dental Hygiene educators on how they may build personal capacity to implement and evaluate the National Competencies in their teaching. An open-ended approach to data collection was utilized to provide opportunity for the educators to share their personal experiences. Creswell (2011) explains: “Qualitative approaches use more open-ended approaches in which the inquirer asks general questions of participants, and the participants shape the response possibilities” (p. 19). An interview guide containing open-ended questions and probing questions was used for the interview process. Participants were also asked if they wish to add anything else before the conclusion of the interview. These data were also included for analysis and interpretation. Creswell further explains that the qualitative researcher may use personal views to interpret and provide personal reflections about the data collected. As a consequence of being an Ontario registered dental hygienist with experience in dental hygiene administration and teaching, I was able to assess and reflect on participants’ experiences in the dental hygiene education system.

Research Design

The research design of this study followed a grounded theory design. According to Charmaz (2008), “Grounded theory starts with an inductive logic but moves into abductive reasoning as the researcher seeks to understand emergent empirical findings” (p. 157). Charmaz further explains that the researcher may interpret findings through abductive reasoning that leads the researcher to establish themes and novel theories that emerge from the data. Charmaz states:

Abduction allows for intuitive interpretation of empirical observations and creative ideas that might account for them....Not only are the surprising data

emergent, but the researcher's theoretical treatment of them is also emergent.

Abductive reasoning can take the researcher into unanticipated realms. (p. 157)

Grounded theory was ideal for generating insightful theories from this interpretative qualitative study. The qualitative methodology required an emergent means of analyzing, coding, and interpreting results as this method has no rigid procedure. Rather, the researcher must be creative in this process (Berg & Lune, 2012). According to Charmaz,

Grounded theory strategies are few and flexible, so researchers may adapt them to the exigencies of their studies. Thus a researcher has latitude not simply to *choose* the methods but also to *create* them as inquiry proceeds. Grounded theory consists of transparent analytic guidelines; the transparency of the method enables researchers to make transparent analytic choices and constructions. The researcher can see and create a direct relationship between data and abstract categories. (p. 162)

Given that no research or studies exist to identify Ontario educators' perceptions of building personal capacity, the grounded theory design was ideal to identify emergent theories that were drawn from the data of this study. "Grounded theory *generates* a theory when existing theories do not address your problem or the participants that you plan to study" (Creswell, 2011, p. 423).

Site and Participant Selection

Purposeful sampling was used to obtain participants for this study. Creswell (2011) states, "In purposeful sampling, researchers intentionally select individuals and sites to learn or understand the central phenomenon" (p. 206). Purposeful sampling is a process where a standard is used in choosing participants who are "information rich"

(Creswell, 2011, p. 206). The chosen sampling method was a theory or concept sampling, which Creswell (2011) describes as “a purposeful sampling strategy in which the researcher samples individuals or sites because they can help the researcher generate or discover a theory or specific concepts within the theory” (p. 208). This approach was appropriate because the participants were selected to help understand the concept of capacity building. The sampling method thus focused on Ontario dental hygiene educators who had experience with the development and mandate of the National Competencies. The dental hygiene National Competencies phase 1 began in 2007, before its publication in 2010. Therefore, the sample group consisted of dental hygiene educators who were currently teaching and who had taught in Ontario ongoing since 2007 or earlier. This participant sample was expected to have the necessary background to reflect on the development and distribution of the National Competencies document during their teaching. Given that all nonaccredited dental hygiene colleges were closed by 2012, the sample of participants was from accredited colleges.

Participants were recruited via the CDHA Educators Listserv. The CDHA Educators Listserv was chosen because it is the only email Listserv available exclusively for dental hygiene educators to communicate in Ontario and across Canada. The inclusion criteria for the sample included registered dental hygienists who: (a) are registered to practice dental hygiene in the province of Ontario, (b) began teaching in 2007 or earlier in a dental hygiene college in Ontario (community or private college), and (c) are currently teaching in an accredited dental hygiene college in Ontario (community or private college). The selection criteria were expected to generate a group of participants who could speak from an informed perspective about the concept of building

personal capacity. Five dental hygienists who met all three criteria were invited to participate in the study. Creswell (2011) supports the selection of these few participants: “It is typical in qualitative research to study a few individuals or a few cases” (p. 209). Given the few participants required, these individuals were purposely recruited only from Ontario to provide a homogenous sample for this study.

This project received a monetary Masters Award funded by the Canadian Institutes for Health Research (CIHR) and the Canadian Foundation for Dental Hygiene Research and Education (CFDHRE). The CFDHRE is affiliated with the Canadian Dental Hygiene Association, the CDHA. During submission for the Masters Award and thereafter, communication continued with administrators of the CDHA who were supportive in providing information for this research initiative.

The participants for this study were educators in Ontario recruited through the CDHA Educator Members Listserv. This recruitment resulted in obtaining five participant interviewees to pose the interview questions and elicit specific information relevant to the study (Creswell, 2011). A gatekeeper oversaw the recruitment process of the study. “A gatekeeper is an individual who has an official or unofficial role at the site, provides entrance to a site, helps researchers locate people, and assists in the identification of places to study” (Creswell, 2011, p. 2011). The participants for this study were identified with the assistance of the CDHA administrative director of dental hygiene practice. This individual acted as gatekeeper to ensure that the recruitment announcement met ethical standards of the CDHA accordingly. This individual also provided a letter of sponsorship for the study to the Brock University Ethics Review Board verifying that the study met the CDHA ethical guidelines. The gatekeeper further

provided access to the Listserv used to publish the participant recruitment announcement for potential participants.

Participant Demographics

Four of the participants had entry-to-practice dental hygiene credential at the diploma level: 2 from community college, 1 from a nonaccredited private college, and 1 from a university program. The fifth participant received a dental hygiene degree from a university in the United States. One participant was a foreign dentist with a Doctor of Dental Surgery degree that is not valid in Canada. Four participants also shared that they had some formal training in education delivery. Specific details of participant demographics are provided in Table 1.

Data Collection

Qualitative data were collected through open-ended questions in individual interviews with the chosen sample of Ontario members of the CDHA Educators Community. Data were collected from three participants through in-person interviews at a location chosen by the participant. Due to distance and travel restraints, two participants requested alternative methods of interviews: one via telephone and the second through Skype. A semi-structured interview guide was used to frame the data collection. Berg and Lune (2012) describe this interview method as using a set of structured questions for obtaining specific information and also allowing the interviewer freedom to ask unstructured probing questions:

These questions are typically asked of each interviewee in a systematic and consistent order, but the interviewers are allowed freedom to digress; that is, the

Table 1

Participant Demographics

Participant	Current Teaching Location	Years of Teaching	Current College	Credentials
Mary	N ON	39 years	PT Community College	Dip. DH from Ontario University, B.A, M.A
Mike	SW ON	8 years	FT Private College	Foreign DDS, B.Ed, Dip.DH
Sarah	SW ON, E ON	9 years	PT at two Community Colleges	D.A, Dip. DH, B.Sc.DH completion, M.Ed (pending), College Education Certificate
Sue	SW ON	7-8 years	FT Private College	Dental Hygiene Degree from US College, M.Ed
Wendy	SW ON	10-12 years	PT Private College	D.A, Dip.DH, Dental Hygiene Degree completion online, College Adult Education certificate

Note. B.A= Bachelor of Arts; B.Ed= Bachelor of Education; B.Sc.DH= Bachelor of Science in Dental Hygiene; D.A= Dental Assisting Diploma; DDS = Doctor of Dental Surgery; Dip.DH= Diploma of Dental Hygiene; E ON= Eastern Ontario; FT= Full-time work; M.A=Masters of Arts; M.Ed=Masters of Education; N ON=Northern Ontario; PT=Part-time work; SW ON=Southwestern Ontario.

interviewers are permitted (in fact, expected) to probe far beyond the answers to their prepared standardized questions. (p. 112)

The questions for the interview were developed following the guideline described by Berg and Lune:

A good place to begin is with a kind of *outline*, listing all the broad categories you feel may be relevant to your study. This preliminary listing allows you to visualize the general format of the guidelines. Next, researchers should develop sets of questions relevant to each of the outlined categories. (p. 117)

The categories to be included in the outline were participant demographic indicators, identifiers of building personal capacity, and the eight domains of the National Competencies. The categories were: (a) year of graduation, education, place(s) of work, courses taught, and location of work in Ontario; (b) building knowledge, building practice, building self-awareness; and (c) professional communicator and collaborator, critical thinking, advocate, co-coordinator, clinical therapist, oral health educator, health promoter. These were then utilized to develop structured questions for the interview and referred to for unstructured probing questions. A copy of the interview guide without probing questions was sent to participants prior to their interview to allow each person time to prepare.

The structured component of the interview consisted of a series of open-ended questions. Creswell (2011) states, “In *qualitative* research, you ask open-ended questions so that the participants can best voice their experiences unconstrained by any perspectives of the researcher or past research findings” (p. 218). Question formulation was also considered in order to eliminate questions that might result in emotional setback or

confusion. Berg and Lune (2012) note the negative response that may be acquired from poorly worded questions. They state, “Affective words arouse in most people an emotional response that is usually negative....for instance, the word *why*, in American culture, tends to produce in most people a negative response” (p. 124).

Probing questions were used to retrieve more information from the participants. Creswell (2011) notes: “Probes are subquestions under each question that the researcher asks to elicit more information. Use them to clarify points or to have the interviewee expand on ideas” (p. 221). Berg and Lune (2012) add: “Probes frequently ask subjects to elaborate on what they have already answered in response to a given question—for example, ‘Could you tell me more about that?’ ...or simply, ‘How come?’”(p. 121). In addition to the structured questions developed from the outline, probing questions were included to encourage further elaboration by participants during the interview.

The questions were sequenced to begin with less threatening questions, such as demographics of the participant, before questions focusing on the main topic were addressed. Berg and Lune (2012) support this strategy:

Demographic questions are frequently about educational levels, date of birth, location of residence, ethnicity, religious preferences, and so forth. Many of these sorts of demographic questions are regularly asked of people in their work or school lives and are likely to receive quick responses with no sense of threat or concern on the part of the interviewee. The underlying rationale for this sort of question sequencing is that it allows the interviewer and the participant to develop a degree of rapport before more serious and important questions are asked. (p. 119)

Following this advice, the interview for this research study commenced with demographic questions.

Subsequent to demographic questions, the interview guide focused on indicators of building personal capacity chosen for this study, including the building of knowledge, practice, and self-awareness. The National Competencies document itself established the importance of building capacity; yet, the actual personal capacity indicators were not identified. Mitchell and Sackney (2006, 2011) described personal capacity as structured by the embedded values, assumptions, beliefs, and practical knowledge of the individuals within a learning community. They contended building personal capacity requires confronting these structures to reveal personal narratives that identify the educator's professional practice and learning. Given that all Canadian dental hygiene educators must build the required knowledge, practice, and self-awareness to successfully teach and evaluate these mandated competencies in their learning community, these elements served as indicators of building personal capacity in this study. The eight domains of the National Competencies were also noted in the interview protocol although they were not all included in the structured questions. When participants did not reflect on all the National Competencies domains, these were asked as unstructured probing questions. The interview guide is provided in Appendix B.

Creswell (2011) notes: "When you write questions (or review those provided by others), you might assess them in terms of whether your question is clear, has a clear response, and whether your questions are within the participants' ability to answer" (p. 389). In order to verify the quality and clarify of the questions, the interview guide was reviewed by thesis committee members for feedback prior to the interviews. Necessary

revisions were completed before including the questions in the formal study (Creswell, 2011).

Data Analysis

To draw meaning from interviews that asked participants to describe their experiences, feelings, and thoughts about their ability to build personal capacity, the research design incorporated inductive qualitative data analysis, which Creswell (2011) describes as the researcher moving from detailed data to larger and general themes. As Creswell (2011) states: “In this way, the explanation is ‘grounded’ in the data from participants. From this explanation, you construct predictive statements about the experiences of individuals” (p. 21).

Creswell (2011) describes the process of analyzing and interpreting qualitative data in six steps: “preparing and organizing the data, exploring and coding the database, describing findings and forming themes, representing and reporting findings, interpreting the meaning of the findings, and validating the accuracy of the findings” (p. 236). The task of analyzing qualitative data has no set or structured procedure. Rather, it allows the researcher to be creative in organizing and analyzing the data extracted from the interview. As Berg and Lune (2012) state, “Because of the creative component, it is impossible to establish a complete step-by-step operational procedure that will consistently result in qualitative analysis” (p. 153). Creswell (2011) similarly describes qualitative data analysis as an “eclectic process” (p. 238). Although qualitative data analysis is not rigid in structure, the process is no less rigorous than quantitative research.

Good qualitative research, like good quantitative research, is based on calculated strategies and methodological rigor. Insights obtained from qualitative research

can not only add texture to an analysis but also demonstrate meaning and understandings about problems and phenomena that would otherwise be unidentified. (Berg & Lune, 2012, p. 154)

To begin the analysis, the tape-recorded interviews were transcribed to typed documents by the researcher. Creswell (2011) defines transcription as “the process of converting audiotape recordings or fieldnotes into text data” (p. 239). Once the transcripts were verified by the participants, a process of data analysis was conducted as outlined by Creswell (2011) and Berg and Lune (2012). First, the data retrieved from interviews were organized into a table to identify answers to the specific interview questions, with the interview questions as headings and probing questions as subheadings. Creswell (2011) describes this organization of the data as a critical step in order to make sense of the large amount of information collected. The data were then read and reread to identify common themes among participant responses. As Creswell (2011) notes: “Qualitative researchers analyze their data by reading it several times and conducting an analysis each time. Each time you read your database, you develop a deeper understanding about the information supplied by your participants” (p. 238). Data tables were analyzed to reflect on the central phenomenon of the research: building personal capacity. By examining the meaning of individual data units and comparing the meanings across the five interviews, common themes were identified in participants’ descriptive narratives that reflected their perceptions in building personal capacity and the chosen conceptual framework indicators in this study: knowledge, self-awareness, and practice. In this step, a long list of descriptive themes that encompassed both the central phenomenon and affiliated indicators of building personal capacity was drawn

from the data tables. The themes included: isolation, division, program structure, administration, top-down reform, choice, necessity of reform, collaboration, communication, knowledge gaps, access to meetings, knowledge, identity, inclusion, trust, vision, valuing, educational background, and dental hygiene students.

The descriptive themes were documented for reference and further analysis.

Creswell (2011) supports the use of themes for qualitative data analysis:

In addition to description, the use of themes is another way to analyze qualitative data. Because themes are similar codes aggregated together to form a major idea in the data-base, they form a core element in qualitative data analysis. Like codes, themes have labels that typically consist of no more than two to four words. (p. 248)

The documented descriptive themes were analyzed to determine analogous characteristics. Hand analysis was used to regroup the descriptive themes by assigning a letter (A, B, C, etc.) to each descriptive theme, with similar themes receiving the same letter. Creswell (2011) describes hand analysis of qualitative data as a “means that researchers read the data, mark it by hand, and divide it into parts” (p. 239). This process resulted in three distinct categories, which were labelled as three major themes: perceptions of *structural influence*, perceptions of *learning access*, and perceptions of *identity*. The original descriptive themes, now deemed minor themes, were assigned to their affiliated major categorical themes (see Appendix C).

Data from the original data tables were re-analyzed and coded according to the new major and minor themes. The three major themes, referenced by the letters A, B, and C, were hand-marked on the original data tables to identify participants’ responses

that reflected the major themes and affiliated minor themes. Once the data table was marked with the letters, data that did not support the themes were removed from the table. These data included responses to individual participant demographic questions that did not relate to the major or minor themes. This supports Berg and Lune's (2012) notion of data reduction: "Qualitative data need to be *reduced and transformed* (coded) in order to make them more readily accessible, understandable and to draw out various themes and patterns" (p. 55). New data tables were produced with the three major themes as headings and affiliated minor themes as subheadings. The marked data from the original tables were organized onto the new data tables under the appropriate major and minor theme headings.

Credibility of Data

Data collected in this study were obtained from five Ontario dental hygiene educators. To ensure that the transcripts accurately captured the participants' contributions, recorded narratives were transcribed and the verbatim transcripts were provided to participants with a feedback letter asking them to verify if the transcript was an accurate reflection of the material they had provided in the interview. Participants were asked to confirm transcript accuracy or to provide any revisions directly on the transcript as they felt required. Creswell (2011) describes this method of verifying credibility of data as member checking:

A process in which the researcher asks one or more participants in the study to check the accuracy of the account. This check involves taking the findings back to the participants and asking them (in writing or in an interview) about the accuracy of the report. (p. 259)

In this study, member checking was utilized to allow all participants to review and verify accuracy of the transcripts of the interviews they had individually provided.

Triangulation of data was also utilized to validate findings. Creswell (2011) explains this process:

Triangulation is the process of corroborating evidence from different individuals (e.g., a principal and a student), types of data (e.g., observational fieldnotes and interviews), or methods of data collection (e.g. documents and interviews) in descriptions and themes in qualitative research. (p. 258)

Data were collected from five participants who represented diverse dental hygiene colleges including community and private colleges in various locations in Ontario, which represented site triangulation. Despite the variety of sites, participant narratives identified similarities in their perspectives. Participants were also asked to be part of the process of validating findings in this study, with the opportunity to provide additional information they felt relevant to the interview discussion. Participants were provided a copy of the interview guide prior to their interview for their reference and reflection. Once transcripts were verified by participants and changes were made as per participant feedback, these narratives were organized onto data tables.

I also used my personal reflections to support the credibility of the findings in this qualitative study. Creswell (2011) claims that a researcher's self-reflective capacity upholds the accuracy and credibility of findings. Disclosing my education and work experiences throughout the study helped me to identify the personal and political history that might inadvertently shape the interpretation of results. As Creswell (2011) states: "Because qualitative researchers believe that your personal views can never be kept

separate from interpretations, personal reflections about the meaning of the data are included in the research study” (p. 258).

Research triangulation from the use of five participants in different types of colleges, transcript verification by participants, and the researcher’s personal reflections all support the credibility of findings in this study.

Ethical Considerations

This study followed the ethical guidelines established by the Brock University Research Ethics Review Board (REB file #13-106) and the CDHA Educators Community. All participants in this study were fully informed about the purposes and requirements of the research, their right to voluntary participation, confidential treatment of their participation and their personal data, and their right to refrain from answering any questions or to withdraw from the study at any time without penalty.

Collection, maintenance, and deletion of data and participant interviews were completed according to the Brock University Research Ethics Review Board guidelines. Tape recordings of the interview were kept by the researcher under lock and key. After data collection was complete and transcribed and the transcripts verified, tape recorded interviews were deleted completely. The transcripts will be destroyed using secure measures upon completion of the study and final approval of the thesis.

There are no known or anticipated risks associated with participation in this study. To minimize bias and deter the leading of participants towards a response, open-ended questions were included in participant interviews. Prior to the interview, participants were informed via the Letter of Invitation that there were no right or wrong answers for this study. The Informed Consent form and interview guide, which were provided to all

chosen participants prior to the interview, also described the participant's rights as a volunteer, including the right to withdraw from answering any question or to withdraw from the study entirely at any time without consequence. Participant confidentiality was maintained throughout the study, including reporting of findings. No linkage between interview responses and participants were identified as no identifiers were included in the recorded interviews, documented transcripts, data tables, or research report. Pseudonyms were assigned for each participant.

Assumptions and Limitations

The qualitative research conducted for this study has assumptions and limitations. Creswell (2011) states: "Similar to quantitative research, the qualitative researcher suggests possible limitations or weaknesses of the study and makes recommendations for future research" (p. 259). In this study, the assumptions and limitations were related to participant recruitment, selection of individuals, method of data collection, and interpretation of results.

Participant recruitment was based on assumptions of the demographics of Ontario dental hygiene educators. The original CDHA Listserv recruitment announcement was limited to three criteria that included Ontario dental hygiene educators who initially earned their dental hygiene diploma from an accredited Ontario dental hygiene diploma program. This criterion posed a challenge when dental hygiene educators emailed to express their interest as a participant but noted that their dental hygiene training was achieved outside Ontario, including other Canadian provinces and the United States. The second recruitment criteria stated eligible participants must have taught in 2007 or earlier in an *accredited* dental hygiene college in Ontario, community or private college.

Certain Listserv members emailed to note that their teaching experience in 2007 or earlier was at a nonaccredited dental hygiene college in Ontario. The purposeful sampling method was to focus on Ontario dental hygiene educators who had experience with the development and mandate of the National Competencies. Because Ontario dental hygiene educators interested in participating in the study identified limitations of the first two recruitment criteria, the criteria were amended to include Ontario dental hygiene educators who are registered to practice dental hygiene in the province of Ontario and began teaching in 2007 or earlier in a dental hygiene college in Ontario (community or private college, regardless of accreditation status). The recruitment criteria failed to include dental hygiene educators from other provinces or on a national level. This exclusion was appropriate for the purposes of the study but poses certain limits on the utility of the findings beyond the province of Ontario. Although the findings are expected to offer insights to dental hygiene educators in other Canadian provinces, the results inevitably reflect the experiences and interpretations of educators who work in Ontario.

The selection of individuals for this study assumes that the sample is representative of Ontario dental hygiene educators. However, recruitment for this study was limited to the CDHA Educator Community Listserv. Membership to the CDHA Educator Community is not mandatory for all dental hygiene educators. Therefore, any Ontario dental hygiene educator who was not a CDHA Educator Community member was not informed or invited to participate in this study.

Conducting individual interviews was the intended method of data collection. Limitations of interviews were recognized, including time and access to the interviewees

(Creswell, 2011). Due to geographical diverse locations of the participants, two interviews were conducted via distance means, one by telephone and one by Skype. As Berg and Lune (2012) explain, there are limitations to telephone interviews: “telephone interviews lack face-to-face nonverbal cues that researchers use to pace their interviews and to determine the direction to move in” (p. 129). The Skype interview was not an equal experience to in-person interviewing. However, this method still provided visual communication during the interview. Berg and Lune identify the positive aspects of web-supported interview processes. They state:

While this type of interview interaction is not identical to a more traditional face-to-face interview, it does approach it in a number of ways. For example, when a respondent answers a question, the interviewer has the ability to ask probing questions to elicit additional information or to run in an entirely different direction, similar to the interviewer’s ability in a face-to-face interview. (p. 133)

Interpretation of findings by the researcher presented a set of limitations.

Creswell (2011) supports interpretation requiring personal assessment at various stages of the research: “Qualitative research is interpretative research, and you [the researcher] will need to make sense of the findings” (p. 257). Interview guide questions were built on the chosen conceptual framework indicators that encompassed my personal experiences and preconceived notions to establish what dental hygiene educators need to build personal capacity. I reflected on knowledge gained from my experiences to relate to participants’ responses to the interview guide questions. However, I recognized that my preconceived notions could steer my judgement during data collection. Participants could have also been prejudiced towards my position and purpose during the interviews, which could

affect their responses. Berg and Lune (2012) describe these “biasing effects” as limitations of interviewing:

The implication is that preconceived notions do exist among interviewees, but these notions are malleable. There can also be preconceived notions of subjects on the part of interviewers. Whether acknowledged or not, ‘There is always a model of the research subject lurking behind persons placed in the role of the interview respondent’. (p. 136)

These limitations were recognized during the interview of participants as I was reflexive on my preconceived opinions and focused on the purpose of this study: to explore *dental hygiene educators’* perceptions of how they may build personal capacity to implement and evaluate the National Competencies. I refrained from providing my opinions during the interviews and reminded participants that the purpose of this study was to learn from *their* experiences. Berg and Lune support the researcher’s ability to overcome biasing effects of qualitative interviews:

But the role of the interviewer is not necessarily established in granite, nor do the interviewer and interviewees operate within a vacuum! It is, therefore, within the capacity of an interviewer to affect even the preconceived notions that subjects may have about the interviewer’s role. (p. 136)

These possible biasing effects did not unduly influence data collection from participants, which revealed similarities in themes as well as unique ideas including several that diverged from the original research questions and the chosen indicators of building personal capacity. These distinct findings were recognized as integral results of this qualitative study.

There were recognized assumptions and limitations in participant recruitment and selection, methods of data collection, and interpretation of findings in this qualitative study. Despite these limitations, the data reflected similar themes across all participant narratives including those that diverted from the original chosen indicators of building personal building. Creswell (2011) supports the researcher's unique perspective as an integral part of interpretation of qualitative results. Creswell (2011) further supports that one interpretation is not more accurate, nor inferior, to other comparable studies. Rather, the results reflect the uniqueness of the participants' data and interpretation of the researcher that provides an exclusive perspective on the subject matter. Recognizing the limitation of data collection as well as subjectivity of data interpretation in qualitative studies, eventual research that focus on the topic of this study may approach participants with less subjective forms of analysis such as quantitative methods.

Researcher's Worldview

Prior to the commencement of this study, my plan was to embark on this graduate research journey through a worldview most familiar and valued from my prior studies and research experiences: a positivist worldview. I had a great appreciation for the empirical methods of scientific inquiry from my previous education and work experiences in biological sciences and healthcare. Creswell (2009) recognizes these factors that influence one's worldview. He states: "Worldviews are shaped by the discipline area of the student, the beliefs of advisers and faculty in a student's area, and past research experiences" (p. 6). However, when establishing my proposal for this study, I soon recognized the limitations of scientific inquiry for exploring perceptions of a select group of participants where little to no previous studies exist on the central

phenomenon of building personal capacity. Exploring educators' perceptions of building personal capacity required a nonstructured and open-ended method of questioning that reflected a social constructivist worldview. Creswell (2009) explains this worldview:

Individuals develop subjective meanings of their experiences--meanings directed towards certain objects or things. These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrowing meanings into a few categories or ideas. The goal of the research is to rely as much as possible on the participants' views of the situation being studied. The questions become broad and general so that the participants can construct the meaning of a situation, typically forged in discussions or interactions with other persons. (p.8)

In order to explore participants' perceptions of building personal capacity, I recognized that empirical inquiry through quantitative methods did not provide an in-depth analysis of participants' views of the matter.

I thus identified the need for qualitative data collection through narratives as these provide opportunities for participants to share and elaborate on their experiences. In applying this method, I had the freedom to probe further into questions for a fuller analysis of the values, beliefs, and embedded assumptions of participants that help to build personal capacity. These anticipated findings could not have been achieved by survey responses or point scales typically used for empirical scientific inquiry. By following a constructivist research philosophy, I was able to analyze and interpret findings while acknowledging my own experiences common to those of the participants. Creswell (2009) explains: "Qualitative researchers seek to understand the context or

setting of the participants through visiting this context and gathering information personally. They also interpret what they find, an interpretation shaped by the researcher's own experiences and background" (p. 9).

Despite this new found appreciation for the social constructivist worldview and qualitative method used for this study, I still retain value for the positivist quantitative method of research as it may be applied to empirical studies in search of measurable findings and expand on previous research using large participant samples. As Creswell (2009) notes: "Qualitative and quantitative approaches should not be viewed as polar opposites or dichotomies; Instead, they represent different ends on a continuum" (p. 3). Given no previous publications exist on the topic of this graduate study, it is my hope that the findings of this constructivist qualitative research have created a cornerstone for further inquiry.

Chapter Summary

This research was conducted through interviews with Ontario dental hygiene educators to explore their perceptions of building personal capacity during the National Competencies curriculum reform. This interpretive qualitative study used open-ended interview questions. Participants for the study were selected using purposeful sampling criteria to locate Ontario dental hygiene educators who had experience with the development and mandate of the National Competencies. Major themes identified through data analysis differed from the original indicators of building personal capacity established prior to the interviews. The novel themes reflecting the educators' perceptions of personal capacity building in their colleges included (a) perceptions of structural influence, (b) perceptions of learning access, and (c) perceptions of identity.

Affiliated minor themes were also identified by the researcher through data analysis.

These major and minor themes will be further discussed in the following chapter.

CHAPTER FOUR: PRESENTATION OF RESULTS

The purpose of this research was to explore Ontario dental hygiene educators' perceptions of building personal capacity. The five dental hygiene educators selected for this study were from Ontario private and community colleges. The educators were interviewed to explore their perceptions of building personal capacity during the National Competencies curriculum reform. Analysis of the data identified three main themes: (a) perceptions of structural influence; (b) perceptions of learning access, and (c) perceptions of identity. These themes were used to organize the presentation of results in this chapter.

Perceptions of Structural Influence

In participants' narratives describing their experiences during the National Competencies curriculum reform, perceptions of structural influence emerged from the data analysis. All participant narratives supported the notion that the National Competencies curriculum reform was a top-down initiative with limited involvement of the educators. However, there was a general consensus that the reform itself was needed to improve dental hygiene educational standards. Participants pointed to a number of structural features that influenced their ability to build capacity to implement the reform.

Isolation

All participants described experiences of isolation, including those within their teaching organization and those deriving from outside influences. Narratives showed isolation due to different faculty positions within a college, as well as perceptions of isolation from other colleges, both private and community, and from dental hygiene governing bodies. Participants identified isolation as a barrier to achieving consistency in

educators' teaching of the National Competencies, which had been an original goal for the publication of that document.

Sarah, a part-time community college instructor, reflected on the isolation she felt in her current college. Sarah compared her previous position as a private dental hygiene college administrator and educator to her current isolating experience as a part-time instructor. She shared:

Because being in the administration position I was in previously, I knew the information. I knew how my course linked to somebody else's, and I didn't like teaching in a bubble, and I still don't like teaching in a bubble. I like to know how much my course affects other courses because they do. [If] you change anything it affects the flow. So I will actually ask to be involved in their curriculum team meetings. It was kind of a fight to get there because in the community colleges most of them, most of the ones I've worked in, they only involve full-time faculty.

Wendy's narrative affirmed the isolation experienced as a part-time clinical private college educator. According to Wendy,

Being that I'm only there 1 day, I'm in a tunnel there. And all I do is clinic so I can show up, and I can leave and I may not have to have a conversation with anybody else except those on the clinic floor.

Wendy identified the number of part-time faculty as a cause of isolation between faculty.

The problem is that there are so many people that work part-time, me being one of them. It's a thought process really. And if everybody is not on the thought process, that same thought process, it would be different and it is very hard.

Sarah confirmed that the number of part-time faculty was an issue.

The narratives also described feelings of isolation between the participants and outside colleges. Sue experienced isolation from colleagues of both private and community colleges due to competition between different dental hygiene education programs in the province:

We tried to reach out to some of the other private career colleges for support. I still think that it was almost a “you are on your own” kind of attitude...From the community colleges it was almost like nobody wanted to share some of their information to help you out to try to better your program....It was like feeling your own way through these massive requirements.

Sarah contended with the same issues. She further identified the challenges that competition caused with trying to achieve consistent dental hygiene education standards for student learning.

There's competition so you don't want everybody being the same. Otherwise, who is going to pick you or your school over somebody else? But at the same time, if there are huge differences and the students are supposed to be the same after semester 2, 4, and 6 according to the community college, how can you ensure that?... Private schools don't have that. There is a lack of transferability.

Narratives also revealed that the dental hygiene regulatory bodies contributed to feelings of isolation. Mike confirmed that at his private college there was no direct influence from the dental hygiene associations or the Ontario dental hygiene regulatory College during the implementation of the National Competencies.

Sue described feelings of isolation when trying to access information regarding the curriculum mandate from outside sources:

I think it was at the time in the [Southwestern Ontario] area, when I go back to my experiences, we were more isolated but yet there were more private career colleges that were starting up and more operational at that time. So again I was still trying to get the proper information and how to do it was kind of limited.

Sarah explained that the exclusion of private colleges caused feelings of isolation between the private and community educators, and suggested it was a problem on a national level. She shared:

I think one of the most important points is just what we were talking about: this disconnect between the private and community colleges. I'm not sure if that is happening all over Canada but one can only assume that what is happening here is happening there. But I think that disconnect is going to be the issue with all the community colleges being together.

To remedy this issue, Sarah suggested, "In term of provinces, I think the disconnect from province to province would be a degree completion, not necessarily if you are achieving the competencies."

Narratives revealed perceptions of isolation during the curriculum reform within a college between educators of different teaching positions as well as segregation between private and community college educators.

Organizational Structure

Given that dental hygiene education currently exists in both private and community colleges in Ontario, the data identified a general consensus that each setting differs in organizational structure. Findings in this study showed the mentorship and resources available to educators in community colleges were lacking for educators in

private colleges. However, these differences had both positive and negative outcomes for the participants.

Narratives indicated that program length in both private and community dental hygiene colleges had been extended to accommodate the National Competencies reform. Sarah explained that the program length in each type of learning environment had transitioned from a 4-semester to a 6-semester private college program, and from a 2-year to a 3-year community college program. The time required to implement the curriculum reform also differed in each program. Sarah identified positive and negative aspects of these differences from her experiences:

The weakness of the private career college, as I'm sure you've heard, they can do things very, very, very quickly. And sometimes that is an amazing thing, and at other times it is a disaster, it is too quick and you don't get to look at it. Did we do it? Yes. Did we do it as a team? Yes. Was it perfect? Probably not because we only had 2 months to actually write the curriculum, somehow weave it into the rest of the course we already had or add a new one. Where [with] community colleges, it is going to take at least 2 years for anything going through and approve and the way they expedited this was amazing, the way they got this through and everybody on board. It was very difficult, that transition, but the support they gave was amazing.

Sarah explained that support in regards to instructor training was provided in the community college. However, this training was not provided in the private colleges:

They [the community colleges] recognize that they might be bringing you in and you're not an instructor, you are a dental hygienist, you are coming in to their

clinic and then you move up into theory. So they do have a lot to teach essential, they teach us how to teach, really...In the private, they didn't have that. Like virtually at all. It was like here you go, and if you don't have the experience, well we'll figure it out as we go along, which is definitely not a good thing either.

As a private college instructor, Sue shared that the lack of training gave her a sense of independence. "I think positively speaking, lots of opportunity for independence, a lot of opportunity to expand as a professional to have opportunities to try out different things, to be independent and basically steering the ship yourself, being the 'captain'."

Sarah shared that her previous private college did provide some training in curriculum development. However, she observed that resources and support were more accessible during her experience at the community college:

They [the administration] did provide us a lot of curriculum development training in private school, but I found it's just easier to access and there's a lot more mentorship at community college where everybody is working to help each other and everybody is working to benefit each other.

The two organizations differed in structure where more instructor training and support were described in the community colleges. However, private college educators did not regard this difference in a negative tone as it provided opportunity for independence and for accomplishing a greater challenge.

Administration

Data from both private and community college participants identified the administration, being the program director or coordinator, as playing a significant role during the National competencies curriculum reform. The data revealed an overall

consensus that the colleges' administration provided the linkages and support to assist and calibrate faculty when implementing the National Competencies.

Sue, Mary, and Sarah identified the program director or coordinator as the line of communication between governing bodies and educators during the reform. Sue explained: "I know our program director at the time would consult with our associations for feedback or some direction." Mary shared that coordinators received information regarding the incorporation of the National Competencies through a meeting held by the provincial association: "There was a consortium in Ontario that involved the primarily public colleges that came together to figure out how this new curriculum was going to look like. And the new curriculum would incorporate the national competencies." Mary explained that she became aware of new initiatives presented at the consortium through the program coordinators. When asked if there was an open communication between the coordinator and the faculty, Mary added:

We came together. The coordinator, the head of the dental hygiene program brought the faculty together, full-time and part-time, to help us understand how the National Competencies are incorporated and threaded through the program and how they are reflected in the course content and course outline.

Sarah shared that the coordinator attended meetings and provided the information to the faculty:

So when I first started, the National Competencies had not been approved yet, but there were some conferences that were put on for educators, workshops I guess I should say, where we were discussing the National Competencies and actually trying to hammer out what exactly they would be, and we were very fortunate that

the program director at the time and the clinical coordinator, so she was the acting coordinator, she went to those meetings and brought the information back to the school.

Sarah later explained that her private college also hired an outside curriculum specialist for the reform in her college. However, it was the coordinator who brought back pertinent information from the National Competencies meetings:

We were really, really fortunate that our VP of academics and the dean actually called in a curriculum specialist from [a career community college] and really walked us in redesigning our curriculum....So what was really nice is we got the background in the national competencies, we had the ideas. She [coordinator] gave us the information that she received at that workshop and the curriculum specialist helped us develop learning objectives and outcomes that would address the national competencies.

Sarah later credited this experience for preparing her when she became program director at another private college. Mike also identified the support he received from his supervisor:

If I needed clarification I would first discuss with my colleagues, and then discuss with my supervisor [program director]....I don't have any problem with administration or fellow colleagues. I think the environment is very positive. Administration does a decent job.

Evidently, administration played an integral role in managing the reform as they provided the information and support educators required for implementing the curriculum. Participants agreed that this structural influence had been largely positive.

Choice

There was a consensus among participant responses that the National Competencies curriculum reform was mandated by the dental hygiene governing bodies and carried out through the administration at each college, with educators being given no choice with the reform. The data also revealed that private and community colleges were not given equal mandate, deadlines, or access to information meetings by governing bodies; yet, both settings were mandated to implement the same top-down reform. Failure for private colleges to do so would have resulted in their closure.

Sarah described her experiences with the Ministry's curriculum reform mandate at her private dental hygiene college in Southwestern Ontario:

We received, it was directive from the superintendent, from the Ministry of Training Colleges [MTCU], and it essentially said, "By this date 2010, you have to have them implemented and prove to us that they are implemented or else we're closing you down".

Given that Sarah worked in both the private and community college setting, she was asked if the community college received the same directive from the Ministry. She responded:

As far as I know, it was only the private schools. I do believe they [community colleges] were asked to implement it [National Competencies], yes, but the community colleges had been made aware and went back and said it is impossible because of the process they must go through in order to make modifications to the curriculum. A curriculum change would take at least 2 years. So they made an agreement that it would be a phase-in as long as it started. I don't have the correct

dates, but I believe it was September 2011, and I could be wrong. But they had to actually start implementing and everything obviously had to be in by another date.

Mary noted the lack of choice for dental hygiene educators after the National Competencies publication:

The National Competencies were published, and then they had to be accepted by all the dental hygiene organizations across Canada. And that would include the national certification board examination. In order to write that national certification board examination, you have to have that material in the curriculum. So the 3-year curriculum, being developed in Ontario, was developed to reflect the National Competencies.

Mike explained that once he was informed about the National Competencies by the program director at his college, it was his responsibility to implement the required reform in his course curriculum: “Well, we had to change our course outlines.... Teachers, we had to map our course outlines. So to make them structured according to the new competencies.” To emphasize this lack of choice, Sarah revealed that college closure by governing bodies was a consequence of not implementing the mandated reform:

It was very obvious that the goal was to close as many private career colleges as they could that were not up to par, which is a good thing. But it actually kind of backfired. A lot of private schools were able to produce the document in the curriculum in their given timeline that they thought they never would, and the community colleges couldn't, so it backfired.

Although the curriculum reform was an externally mandated project, participants did not witness or experience resistance to the mandate. As Sarah explained:

I don't think it was resistance because they knew it had to be done. I just think some people wanted more control....That is my interpretation of what happened: Here's your curriculum in a box, take it. I don't think there was actual true resistance because nobody had a choice. You had to do it.

Participants also did not identify resistance or mistrust in their experiences. As Sue explained:

As far as experiences and distrust, if I can't meet these requirements? I don't think I've experienced anything like that. I think it's been dropped in our lap and run with it. See what you can do. It's brand new.

Wendy added, "It was just automatically expected. There wasn't a matter of needing to trust them [administration]. You were expected and you did it."

Narratives described the National Competencies as a top-down mandated reform where educators were given no choice in the implementation. Despite this structural feature, there was no resistance described as participants were committed to the required reform.

Necessity of Reform

Participants' involvement during the National Competencies curriculum reform was described as an obligation to comply, or risk the closure of their college. However, the data also revealed a consensus among participants that the curriculum reform itself was a necessity. Achieving higher standards in dental hygiene education was identified as a positive outcome of the National Competencies mandate.

Sarah indicated that the National Competencies was a needed reform, but she did not support the implementation: "I think we definitely needed it. I did not necessarily

agree how they forced it into play and it was political reasons, and I was involved with an association during this political time.” Sarah also described the reform as an emergency response to the state of dental hygiene education in Ontario. She explained:

So a lot of it was based on the push back, there are so many schools now, there are so many graduates, the quality of education is poor, people are not passing the board exam, people are not passing clinical exams, they are becoming unsafe, etc. I think it was more of an emergency situation in Ontario.

For Wendy, the closing of colleges by the Ministry was a needed outcome. She said:

“There are so many hygienists out there. So, our College needs to limit, and we are, and that’s changing and I think in 5 years we’re going to see a different demographic.”

Wendy also recognized the elevated expectations of the private colleges to remain open:

“The private schools are having to prove themselves more than most of the other ones.”

Mike saw the closure of nonaccredited dental hygiene colleges as a favourable outcome.

“I’m pretty sure it is a positive thing....Speaking of nonaccredited schools they were slightly substandard compared to accredited schools.”

Participants identified feelings of positivity as all acknowledged the higher education standards the National Competencies were expected to achieve. Sue described how the National Competencies helped her teaching:

I think becoming more aware as an educator of being conscientious of trying to make sure I’m hitting these eight components or competencies along the way.

Trying to instill professionalism. Trying to incorporate those kinds of things has become more of a forefront of the way that I teach. So it gives me a little more of a direction, more of a focus.

Mike also identified positive aspects of the National Competencies: “I think it [National Competencies] was a positive thing. Students now have more clinical exposure; they learn more community, so I think they are better prepared for future clinic.” Sarah explained that the elimination of private dental hygiene colleges that were not up to standard resulted in more inclusion for the private colleges that remained:

I find that now that, forgive me for lack of better terms, [we’ve] weeded out the schools that really potentially shouldn't have been there, there is significant support now. So I think the playing field has definitely changed and they [associations] really do want everybody working together where it wasn't like that before.

Despite the barriers due to structural influences as described in participant narratives, there was a general consensus that the National Competencies was a needed reform for elevated standards of dental hygiene education.

Perceptions of Learning Access

Themes reflecting participants’ perceptions of learning access emerged from the data in this study. Knowledge sharing was a deficiency identified among participants. However, more inclusive opportunities for learning were described after the National Competencies mandate and closure of colleges. Access to learning included both interpersonal elements, such as collaboration and communication, and personal elements, such as knowledge gaps and access to knowledge.

Collaboration

The data revealed that experiences of collaboration within the college varied among participants. Participants from private colleges described being dismissed from

collaborative opportunities outside their college compared to community college educators. However, collaboration of some kind occurred within both settings.

Sue described her experiences within her private college as being supportive for the purpose of developing consistency within the curriculum:

We were in a very strong atmosphere where we wanted to be successful....So I think collectively we were all on the same page where we were brainstorming. We were able to suggest how to make changes to our curriculum. It was very open and very receptive because we wanted to be supportive of each other, so with that kind of initiative we were more cohesive.

However, Sue reflected that these collaborative experiences occurred only with fellow faculty in her college:

I think the support was more internal from colleagues, from the people that we worked with, people that might have had connections to other professionals who may ask for feedback here and there. It was more internal, your own faculty.

Sarah illustrated some barriers to knowledge sharing with full-time faculty in her community college. She explained, "This is a personal opinion, it is sometimes difficult with the full-time staff because it is almost that they think: They are just copying my work. Why do you want my outline?" Wendy spoke about experiences in her private college where no collaboration took place due to the lack of financial compensation for extra time:

There is zero collaboration. I know at the other school where I used to work they had us come in a half an hour earlier and they allowed us to stay on and at least they paid us for ½ hour later, so we would have collaboration....We didn't feel

like we had to get up and leave and go because I already put in my time. In that sense, in the present school it would be lack of time and being paid. We are not being paid to educate each other.

The data showed a general consensus among participants that collaboration was needed with other colleges. Sue offered: "I think that in the current place of employment, I think that we could probably be more proactive in including opportunities for meeting and collaboration for other schools. I still feel isolated in that." She later disclosed that the private dental hygiene colleges had fewer outside opportunities for collaboration:

I do think that in a private career college we don't necessarily have the opportunities as public educators. We don't necessarily have the opportunity for constant interaction with other health care providers or other educators in different specialties, which I think we could value from their input as well because they have different ways of approaching things.

Sarah described a dental hygiene collaborate website developed by the national association where community college administrators could post their school's curriculum to encourage sharing among colleges:

I don't know if you know, but they [National Association] actually have an online website where they posted all the curriculum mapping [but it] is only available to the program directors/coordinators I believe,....Not a lot of people are doing it, because again there is competition. And private schools are not involved in this. I think it would be great to have something like that but understand that there are politics and competitions involved. But I find one weakness for me is that I don't hear about what is happening everywhere else.

Given that the dental hygiene collaborate website was limited to community colleges, Sarah later stated: “What you get is a barrier with those in private.”

Sue suggested the need of having more opportunities for collaboration outside of Ontario. She explained:

To be able to see other examples of what is going on across Canada allows me to open my expansion and think a little bit more. But I think that we need more opportunities where we are collaborating collectively as groups. I don't know how that would happen.

Sue later noted the benefits of being a member of the national association educator group (CDHA, 2008):

I personally am a member of the Canadian association, educator membership, where I have the opportunity to see concerns that come from other provinces, other professionals, which keep me abreast as to concerns that are going on so I feel more inclusive that way. But I think we could potentially form some sort of group.

Participants identified challenges with collaboration both within and outside of their colleges of instruction. Although participants acknowledged that they had some collaborative experiences, the challenges caused barriers to learning access.

Communication

Communication was a theme where participants generally identified areas of inadequacy. These included the communication between educators of part-time and full-time positions, between administration and faculty, and outside the province. Narratives

identified a general consensus that a means of providing communication between all dental hygienists would be beneficial for the profession.

Given the segregation between the full-time and part-time faculty due to structural influences, narratives also described challenges in communication, especially for part-time faculty. Wendy attributed deficiencies in communication at her private college to the number of part-time faculty. When asked what she felt she needed in order to overcome these, she explained, "It would be nice that they don't have 10 instructors, they maybe have four or five instructors....I've worked with three different people on my one day; actually none of us get to talk together. None of us talk." Sarah described a similar challenge with part-time faculty at her college, but shared that her community college tried to fill these gaps of communication:

I believe they [community colleges] are working hard to try to bridge that but there are only so many resources. So to have meetings where every part-timer is involved, I mean sometimes it is impossible. The information could be more readily available than it is.

Sarah later expressed that the educators should be responsible for opening communication: "I think admin expects people to be open with their information because those discussions have been had. So I think obviously they need to encourage it but I think it is the faculty who actually needs to do it." Mary also shared that part-time faculty were not making the effort to be engaged in communication via the educator members' listserv:

I don't think many of them, I would suspect that most of the part-time clinical educators don't belong to that [educators' email]. So I suppose that would be a

starting point, if everybody was engaged, but even though they may belong as an educator, they don't necessarily engage in the conversation.

Mary also acknowledged the limitation of communication for the purpose of change. Speaking from her experience in dental hygiene governance, she observed that work is needed to create change:

I learned this a long time ago and that is how I happened to get involved right from the beginning....If you want to change something you got to get on the inside. You really have to work at it. You just can't whine.

Wendy also shared the opinion that change is not simply accomplished through talk but that changes in attitude are also required:

One time talking to people doesn't create change. We know that from teaching, right? And sometimes it's a matter of, it's not just a change, it is an attitude that needs to change. And I don't mean a big attitude but it's a process that is different and you know if you are not all on board together and encouraging each other, it doesn't always happen.

Given that the National Competencies curriculum reform was a top-down initiative, administrators were identified as key players in relaying information between governing bodies and educators. Sue shared that sometimes an educator representative would attend information meetings on behalf of her faculty. However, the educator representative did not always relay the information back to the faculty. She explained:

I know we have opportunities where we have educators that go from different schools and they go into an educators club and the conferences. I think as educators we need to have more opportunities to learn from each other. I think

we have representation that goes from one college to another college for these large meetings, and some of that information doesn't always trickle down to the people that are delivering the content, the instructors.

Sarah also identified the limited communication with dental hygiene educators during the reform as most faculty were not involved:

They [national association] did develop the educator workshop, they did host them and fund them and give us that opportunity, just not everybody was involved, which can make it difficult....Only institutions were able to go and that was because of finance, so it makes sense. But with the lack of communication from the top down, it could have been a lot more smooth if everyone was involved.

Generally, participant narratives indicated that opportunities for communication outside of their college and outside Ontario were few to nonexistent. Sarah explained that the differences in scope of dental hygiene practice between provinces caused this disconnect:

We are not knowing what other provinces are necessarily doing. We have an idea with their scopes, but it is difficult and I think there needs to be more communication among educators. Yes there's the national forum, the Canadian association, but maybe in Ontario there could be something through even the schools themselves, the educators' workshop where everybody is involved.

Sarah also described the need for more communication between educators in order to achieve consistency with curriculum development and educator knowledge nationally:

It is very difficult trying to 'claw ' yourself through the documentation [National Competencies]; it should be readily available in my personal opinion. I find a lot of it is held between or behind closed doors other than the public document of 'here's what they are'....I think there needs to be a streamline process of curriculum development or just a database where we can have that communication or have that information available to all. You are a teacher; you need to know what is going on. There are a lot of people who don't, which is unfortunate.

Evidently, educators' dismissal from the National Competencies process resulted in limited communication between faculty of other colleges and of other provinces. This demonstrated that the collaborative purpose of the reform was not successful.

Knowledge Gaps

Participant narratives identified knowledge gaps due to educators' part-time or full-time status, as well as diverse educational backgrounds of instructors. Knowledge gaps were also more frequently described in private college faculty as compared to faculty at the community colleges. Suggestions to close these gaps included the need for continuing education and standardizing dental hygiene education at the degree level.

Knowledge gaps were identified for part-time dental hygiene educators, both in private and community colleges. As a part-time community college instructor, Sarah shared that her knowledge of the National Competencies was due to her networking outside her college:

I have been very fortunate because I've been able to network outside of school and I've seen those people in those networks in meetings within my school so I

can have those conversations, whereas I'm not so sure that other people can or have. It is just something that people may not be aware of. I've had somebody asking me just last year what those national competencies were. I thought: "You're teaching. How you could not [know]?"

Sarah observed that access to curriculum meetings was limited due to finances. She recognized that the limited access created knowledge gaps in that she herself did not know exactly what was expected for the curriculum reform:

When we did the [central Ontario] school curriculum review, major, major gaps. Major gaps, which is fine since it is the first time, but nobody else knows that, only people at the curriculum meeting know that. I actually have been making my own syllabus at [central Ontario], so they give me course outlines, I have to do the week-to-week learning objectives for each week. How did I know the depth was enough? What they were expecting?

From an alternative perspective, Sue regarded these knowledge gaps as opportunities for curriculum development as educators have the ability to explore and innovate. She explained:

I think it's [National Competencies] been dropped in our lap and run with it. See what you can do. It's brand new. With the educators' membership that I have with the Canadian association, I see lots of educators still try to incorporate a variety of levels of these competencies in the program....Where I think we are still struggling but we are still trying to invent and trying to figure out as we go along. And I think we're still going to see new inventions along the way.

Knowledge gaps resulted from instructors' dismissal from the reform and limited access to workshops. Therefore, the National Competencies itself was not seen as achieving the goal of standardizing dental hygiene education.

Access to Knowledge

Participants identified barriers to accessing knowledge during the National Competencies curriculum reform. There was some noted improvement in meeting access for private college educators after the National Competencies reform mandate and closure of colleges. However, reform meetings and workshops still involved administration more than educators. Some participants suggested the need for an online open forum inclusive to all dental hygiene educators across Canada.

Sue shared her perceptions that private dental hygiene educators have limited access to knowledge as compared to those at the community college: "I think there is more opportunity for professional development in public ones." Sue suggested that the governing bodies should provide opportunities to the private educators as well: "I think as an educator they could open that up to private educators to benefit as well if we want to have full collaboration and things like that."

Mary described some improvement in access to knowledge after the publication of the National Competencies: "As a matter of fact, there was a workshop and in [Southwestern Ontario] which was for educators and it was for *both* public and private." She also described an online webinar provided by the national association that addressed the entry-to-practice competencies, and that was available to everyone. However, Mary still identified some barriers to accessing the National Competencies workshops. She disclosed that not only was attendance limited in numbers but also she herself had to pay

to attend: “I paid, I wanted to go. Only so many could go from the school. I’m sure the program coordinator would have probably liked us all to attend.”

Sarah identified the challenge of accessing knowledge in other provinces outside Ontario: “I find one weakness for me is that I don't hear about what is happening everywhere else.” She later added:

I think we do need to have a lot more discussions nationally. I think that's a weakness. We are not knowing what other provinces are necessarily doing. We have an idea with their scopes, but it is difficult and I think there needs to be more communication among educators.

Sue proposed a forum for knowledge sharing for dental hygiene educators, similar to those available for elementary and secondary school teachers. She explained:

I think it would be really, really nice to have some sort of forum where everyone was involved as a dental hygiene educator, or even nationally if they were involved in this and there's a huge data base. Look at grade kindergarten to 12; they actually have a data base of curriculum from JK to grade 12....So why is it not something that we could have as hygienists or dental hygiene educators? Why is there not a resource that everyone can go to other than that single document [National Competencies] that is published on the Canadian association website?

Narratives described the participants’ perceptions of learning access during the curriculum reform, along with challenges experienced with collaboration, communication, and access to knowledge. These challenges further resulted in knowledge gaps, most particularly for part-time and private college educators.

Perceptions of Identity

The current dental hygiene entry-to-practice credential in Ontario is the college diploma. Narratives confirmed the expectation of a degree as the entry-to-practice credential in Ontario. There was also general consensus among participants that clarification of the dental hygienist's identity was needed. Participants shared feelings of being undervalued, most notably as a private college educator and an Ontario educator. Participants also described the challenges with the increasing number of lower quality dental hygiene students and graduates and how they negatively affected the identity of the dental hygiene profession.

Identity

The data revealed that the topic of dental hygienists' identity was not clearly defined. Mary discussed the uncertainty around identity: "I think as an individual educator that ties into the profession as a whole I think we need to have a conversation about who are we: What is dental hygiene?" Mary acknowledged that dental hygiene educators do not have a concrete identity. When asked how educators may achieve this, she responded:

I don't think it is just a matter of the educators. I think it has to come from even the Canadian association. It has to come from the association to lead that. I think they are doing their best in trying to get that: What is our identity, and they send it out there. But we're obviously all over the map.

Mary later offered that dental hygienists need to have a conversation through the educators' group and as a profession generally. Sarah also suggested the need for more discussions on a national basis, which was currently seen as a weakness.

Mary indicated that the current work market had led dental hygienists to be identified as cleaners: “Many dental hygienists have been forced into a situation in practice and they’ve accepted it. They’ve accepted that role as a cleaning lady in the dental office.” Sarah added that the role of the National Competencies was to provide public awareness of the competence of the dental hygiene profession and their identity:

The whole point in doing the competencies was to ensure we had a very specific level and the people would interpret us as professional and we are competent. We are not just the “Molly Maid.” We are not just the cleaner.

However, Mary did not identify the National Competencies as attributing to the identity of the dental hygiene professional: “I don’t think the national competencies have particularly resulted in any kind of expected advancement or credibility of dental hygiene, at least not in Ontario.”

Sue reflected on the future identity of dental hygiene education in Ontario. She suggested that future changes would include dental hygiene programs moving to the university level. She added, “We do have the degree completion programs, but I think we are going to see some changes in the next 20 years of where the delivery actually occurs.” Sarah credited the university degree rather than the National Competencies as a means of unifying dental hygienists in each province: “In term of provinces, I think the disconnect from province to province would be a degree completion, not necessarily if you are achieving the competencies. We want you to be higher than the competencies.” Wendy, who worked in West Coast Canada and Ontario, described the negative opinions of dental hygienists in British Columbia (BC) where dental hygiene degrees are offered: “The hygienists feel they are better in BC. They don’t feel like the Ontario hygienists are

very good, and yet I've cleaned up messes in both parts. I've had to report hygienists out in BC." Wendy added that she did not feel dental hygienists needed the degree in Ontario. However, she recognized that other provinces' expectations for Ontario to have a degree may improve Ontario's identity. "Alberta wants us to have a degree in Ontario. We need mutual respect and we are not getting the respect from other provinces...For them to respect us, we kind of have to prove we need a degree."

The narratives shared by the participants regarding perceptions of identity during the reform and as a professional in general did not present one identity for dental hygienists.

Vision

In discussing what participants needed for building personal capacity, themes reflecting the vision of the dental hygiene educators emerged. Participants' opinions varied on what the vision might be.

Sue reflected on the need for dental hygienists to be more unified and acknowledged the National Competencies in accomplishing this vision:

I think that we need to be more global, we need to be more in lines of "You're not private, you're not public." We are all technically one. We need to be thinking that the national competencies allow for portability, for equality, and I think there is still that division between the dental hygienists in education having a sense of being superior or inferior because of the delivery: we are in college or we are in a university. Whatever the case, we need to be more collaborative as dental hygiene instructors and not isolating.

Mike acknowledged the need for higher knowledge for dental hygiene educators:

We need to become experts in our fields. Sometimes I feel that instructors also need to work on their knowledge, be on top of new things. Instructors should be familiar with all the subjects, not only the ones they teach.

Mary discussed the lost vision of the dental hygiene profession. She stated that dental hygienists need to be brave. She reflected on this concept as she explained that many hygienists are not working within the legal boundaries of their scope of practice as outlined by the Dental Hygiene Act because they did not feel confident to question the dentists at their work:

I think that dental hygienists really have to be in many cases brave....Many dentists still believe that it's their practice, their business and many still believe that whoever is employed by them have to do what they say....You sometimes, you do have to be brave. You have to take the Act and show them that it is there and that is your standards of practice you are adhering to and you are responsible for that. I think that many dental hygienists are not confident enough to do that.

When asked what she felt dental hygienists needed to build that confidence, she responded:

I think we've lost our vision. And there's a biblical saying that when there is no vision, the people die. And that is why I asked if you were with the educator's group and you've seen the conversations back and forth? You can tell we don't know exactly who we are. At least for me that is what I see.

Mary later added:

We are having conversations and discussions we had 30, 40 years ago. And it is very difficult for those of us who have been around for a long time to see these

issues coming up....There are many dental hygienists that work very, very hard, those in the Association, in Ontario, to go forward for self- regulation, and certainly that was a vision and a goal....many young dental hygienists really don't understand how hard it was to get self-regulation. Dentistry really did not want dental hygienists to be self-regulated and a lot of those issues that I saw so many years ago, they haven't gone away.

Mary explained that the lost vision was an unresolved issue from the past that had been recently a topic of discussion on the national association educator members' Listerv.

Valuing

Participants' narratives revealed some feelings of being undervalued within their college, between the private and community colleges, and on a national level. Sue had experienced negative feelings within her private college and from outside community colleges.

On the negative side of things: administration not valuing, also felt a lot of discrimination because of working in a private career college, feeling that from the community college systems, feeling that we're less qualified, less confident has been an issue.

Despite Sue's education credentials at the Master's level, as a private college instructor she still experienced feelings of being undervalued from fellow dental hygiene educators:

So when you meet in the educators' clubs and things like that, feeling devalued in the profession even though we might come from having stronger educational backgrounds or having similar experiences just because we are teaching in a certain environment, we [private college educators] are considered less valuable.

She wondered if private college educators were undervalued due to the limited resources at private institutions, which reflected negatively on its affiliate instructors.

I've noticed more so in private that the professionals in the environment are undervalued. I don't know personally what it is in private versus public, but I think that some of it boils down to the resources are different so I think we're undervalued.

Sue acknowledged limited rights of private college instructors as compared to those in community college: "I don't think we have consistent rights such as you would find in a public one. They are unionized so they have a voice." Sue also reflected on the professional development opportunities community colleges offered to their faculty, which were not offered in private colleges. As a result, she expressed that community college dental hygiene instructors did not value those from the private institutions:

I see that community colleges provide more opportunity for professional growth, for respect, for value. So I think in some respects I'm not sure if the community college educators feel we are on the same plane or same page, as equals, as qualified educators. I just feel that sometimes it is still in the mindset that private isn't up to snuff so to speak.

She later described experiences with being dismissed as an item writer for the national dental hygiene certification board exam, which she attributed to "discrimination" against private college instructors.

Participants did not identify the National Competencies as a mechanism for improving their perceptions of professional value. When asked if the National Competencies have had any influence on dental hygiene educator credibility, Mary

responded: “Not at the moment.” Rather, she placed the task of developing self-value on dental hygienists:

The longer we talk about ourselves as cleaning ladies, or cleaning people, you know you’ve seen me say that language is important and the public picks up on this. So we have to value what we do. The Canadian association has said the dental hygienist is the primary preventive person, and unfortunately, in most practices, they work according to the insurance schedule.

Evidently, the National Competencies did not improve participants’ perceptions of valuing in the profession.

Educational Background

All participants in the study had education credentials at the Bachelor’s or Master’s degree level. Despite the participants’ having higher educational training, few were able to identify specifically how their training assisted with the curriculum reform. As a private college educator with a Master’s degree, Sue explained that at her current private college she felt less negativity due to elevated standards of teacher training: “In the place where I am currently employed, I feel there is less tension in regards to ‘You know best, I know that’ because there is that elevated expectation now in the environment that you have to have degrees.” However, when asked how educational background contributed to teaching and implementation of the National Competencies, Sue responded:

I don’t know....My education has made me think differently than somebody else.

I have seen very valuable suggestions come from people that have no education or

preparation. They are just coming in with a dental hygiene diploma, but they have the real world experience.

When asked how pursuing education from the diploma to the Bachelor's level helped with implementing and evaluating the National Competencies, Sarah responded, "I don't think that [Bachelor degree] helped me with it. It was more the Adult Education certificate and the teaching credential." Sarah was also asked to reflect on the contribution of her education from the Bachelor's to the Master's level. She replied, "I don't think it did [contribute]. My Masters, I haven't done anything different at this point, because it is in postsecondary studies." Wendy also regarded the instructor's education certificate as more beneficial than completion of her dental hygiene Bachelor's degree. Mike, a foreign dentist, acknowledged that his Bachelor of Education had prepared him to implement the National Competencies.

Wendy attributed her learning experience to working with dentists over the years. She explained, "I tend to be a learner through observation, more so than my studying. If I can have a conversation I love picking their brains." Mary also identified the benefit of having learning experiences with dentists and other health care professionals through her diploma program offered at an Ontario university in late 1950s:

First of all I believe that I got the dental hygiene theory and skills from my diploma course. Reflecting upon this, we were taught a number of things. We were taught by skill and knowledge of both dental hygienists and dentists and there were specialists too. There were periodontists teaching perio or ortho. Also we took classes on campus with occupational therapists, physiotherapists was combined at that time, and dentistry.

Participants were asked to reflect on their preparation to teach the domains of the National Competencies documents. Sarah reflected on the domain of critical thinking. When asked how she felt her educational background contributed to her critical thinking, she responded, “I think that is really difficult. I think I assume that it has...But I believe it is more my interpretation of what is critical thinking, not somebody defining it for me.” Sue also reflected on how her studies in higher education outside of dental hygiene had contributed to her critical thinking ability: “Having a broader opportunity to experience different courses beyond dental hygiene has allowed me to become more of a critical thinker.” Wendy’s discussion of critical thinking described her ability to teach this domain as an integral part of being an instructor:

I think it would be innate; it would be just part of the system. I’m looking at critical thinker: You know you should always be. As a good instructor you shouldn’t be just giving out that information. You should be asking them for that info.

Mary added that critical thinking was currently a “buzz word” but that this thought process was also present in her curriculum in 1964 before the publication of the National Competencies.

The data revealed the current expectation for dental hygiene education being offered at the university degree level in Ontario. Mary shared that, in her opinion, this expectation of university training was from the educational facilities. Mary also voiced her support for higher education to prepare dental hygienists as “it’s helpful to have some theoretical foundational knowledge.” She reflected on her previous dental hygiene program coordinators and their pursuance of higher education at the degree level before it

was an expectation or mandate. Mary acknowledged their striving for higher education reflected positively on their practice:

The first two coordinators came out of university programs, and in that process, and maybe it was just them, I don't know, but they saw the value of education and they are going to transmit that. There is a definitely a difference in the way things are taught at university and the way they are taught at the college.

Mary shared her dismay that the Ontario dental hygiene programs were not able to combine with the universities despite past attempts.

Students and Quality of Graduates

Participant narratives showed similar concerns and challenges concerning the quality of dental hygiene students and graduates of the profession. There was a general consensus among participants that there were too many dental hygiene graduates. Some participants identified that the students were entering the program unprepared, while others stated that the selection of students was lowered in standard due to the number of colleges available and the current flooded market for dental hygiene employment.

Mary established that dental hygiene is one of the few self-regulated professions offered at a community college level and expressed her concerns with the preparation of students entering the dental hygiene programs: "I think that there is a lack of foundational knowledge frequently from high school. I'm not saying for all the students, but for some of them." Sue described challenges with teaching critical thinking as students were entering the dental hygiene program without the required foundational knowledge:

Potentially they are lacking in written, verbal, communication skills, not being able to have proper reading comprehensive skills. So these are the kinds of things I feel I am backtracking, that they should be coming into a professional college program. So I feel that I am going back and trying to re-teach critical skills.

Mike shared his feelings about the unsuccessful outcomes of these new students:

It is discouraging when these students cannot pass your subject and they are expelled from the program. Of course it is discouraging as a teacher. But I think it's not only our fault. It's also, as I said before, selection.

Wendy described her experiences with the change in student selection entering the program.

If you look at the grades for the past 10 years from the private school they probably have gone down. I think the first 5 years were awesome and then afterwards because all those students who really wanted to get in had to compete to get in so we still got the best cream of the crop.

When asked what she felt she needed for this student group, she responded, "We may have to readdress how the program is set up."

Mike reflected on the crisis of the poor student performance and acknowledged the National Competencies in aiding the situation: "I think it's not very good for the profession. And that's why I think maybe these competencies are a good thing so at least we can compare all of them. At least they will." Yet, Mike identified the biggest challenge as the current selection of students with the market conditions.

Right now the market is overflowing. So not many students are wanting to go to dental hygiene, and that affects our selection. So we don't have as much variety

as we used to, of students, and that may lower the standards in the profession, of the graduates.

He later explained that there is less selection, especially for the private colleges: "Before, it was very competitive. It seems like [now] people try to get into community colleges first and if they are rejected or some reason they cannot go there, then they go to private schools." When asked, as a teacher, what he felt he needed to overcome this kind of barrier, Mike responded:

Well, it's a very difficult situation. We cannot refuse because it is a private college so we need to generate some income. On the other hand we need to make sure that we follow the standards. But maybe the selection should be a little better. Maybe we should refuse some students from the beginning that we feel they are not going to graduate, maybe they should be dismissed at the early stages, or never be accepted in the program.

When later asked what dental hygiene educators need as a profession, Mike offered:

I think we need to reduce the amount of graduates. Maybe reduce the amount of schools. Even though that will leave some of us without jobs, but I think it will be better for the market and for the standards, because right now we have too many graduates and we are overflowing the market.

Evidently, the standards of students entering dental hygiene programs and those graduating have diminished in recent years. The data revealed the National Competencies mandate was to amend the crisis of the number and quality of graduates from dental hygiene programs. However, participant narratives confirmed that this crisis is still present.

Chapter Summary

The objective of this study was to explore dental hygiene educators' perceptions of building personal capacity during the National Competencies curriculum reform. Interviews with educators of diverse educational backgrounds, teaching assignments, and college of instruction provided valuable insights. The data revealed common themes that described educators' perceptions around building personal capacity. Personal capacity was articulated through the themes of structural influence, perceptions of learning access, and perceptions of identity. These themes will be discussed in the following chapter.

CHAPTER FIVE: SUMMARY, DISCUSSION, AND IMPLICATIONS

In the current era of globalization, organizations are faced with continually changing external forces that require adaption for survival and growth. Educational institutions, although not necessarily affected by globalizing forces, are not exempt from these challenges. Colleges, for example, must constantly change and adapt, as the members seek to implement new organizational initiatives that meet the needs of a changing student body and a changing external environment. As most organizations, colleges possess a top-down bureaucratic structure where leaders play an integral role in the functioning and maintenance of all activities, and are recognized as the driving force behind school reforms. However, it is those at the forefront, the educators, who are given the task of successfully implementing the change, and yet are largely dismissed during reform developmental phases. The study described in this document explored dental hygiene educators' perspectives of how they may build personal capacity during an externally mandated national curriculum reform. This chapter provides a summary of the study and a discussion of key lessons that emerged from the exploration of participants' narratives used to develop a *grounded theory* of how educators may build personal capacity. The chapter includes implications for theory, educator training and practice, educator identity, and further research.

Summary of the Study

This study was conducted to investigate how dental hygiene educators build personal capacity as they implement and evaluate a new curriculum mandate. Given that personal capacity entails the knowledge, values, assumptions, and beliefs of members of a learning community (Mitchell & Sackney, 2006, 2011), the indicators for building

personal capacity used to develop the conceptual framework for this study were (a) building knowledge, (b) building practice, and (c) building self-awareness. To conduct this qualitative study, a semi-structured interview guide was developed consisting of open-ended questions based on the conceptual framework and used during the interview process. Participants chosen through a purposeful sampling method shared professional narratives that were explored for common themes to identify participants' perceptions of what they needed to build personal capacity.

The findings of this study were organized under the themes of participants' (a) perceptions of structural influence, (b) perceptions of learning access, and (c) perceptions of identity. With respect to the first theme, participants' narratives identified the top-down bureaucratic structure of dental hygiene colleges where administrators were the driving force behind the reform in participants' individual colleges. Despite their having no choice in implementing the National Competencies mandate, participants recognized the necessity of the curriculum reform and its benefits to dental hygiene education, and, therefore, did not express resistance to the required change. Concerning the second theme, participants described the need for more collaborative initiatives, with improvement in communication within and outside of colleges to build professional knowledge among educators. Under the third theme, participants described the need to build a common identity and vision for the profession and shared the perceived requirement of more communication among educators nationally in order to achieve these. Despite this study's focus on dental hygiene educators, its findings may be applied to educators of other educational organizations or members of noneducation organizations in future research and studies.

Discussion

This study identified the effect of structural influences on the relationships of members of the organization. Most colleges function as bureaucratic organizations where leaders are the drive behind school reform, while the educators are expected to successfully implement the mandated change. Narratives identified educators' perceptions of isolation within and outside of their colleges, especially those of part-time status. Participants described receiving information regarding the reform from their college administrators and given limited to no information regarding the curriculum mandate from outside sources, especially to those educators in private colleges. This segregation of members of dental hygiene colleges exemplifies the barriers to developing a learning community. Mitchell and Sackney (2011) identify the necessity of structural support within an organization for achieving an inclusive learning environment for all members: "A learning community is supported when organizational structures, power dynamics, and procedural frameworks support professional learning for individuals and for groups" (p. 17). This study revealed that the isolation of educators within and between their schools resulted in educators being unclear of the expected reform outcomes. Hargreaves and Fullan (2012) warn of the predicament of isolation as it not only shakes teachers' confidence but also prevents collaborative initiatives among educators:

Uncertainty, isolation, and individualism are a toxic cocktail....When teachers are afraid to share their ideas and successes for fear of being perceived as blowing their own horns, when they are reluctant to tell others about a new idea on the grounds that others might steal it or take credit for it, when they are afraid to ask

for help because they might be viewed as incompetent, and when they use the same approach year after year even though it is not working— all of these tendencies shore up the walls of individualism and isolation. They institutionalize conservatism. (pp. 107-108)

Evidently, isolation among educators deters knowledge sharing and collaboration and leads to poor outcomes of school reforms.

Narratives that described educators' independence were limited to the individual educator's classroom. Whether a private or community college educator, all participants concurred that they were given no choice with the bureaucratically mandated reform. Therefore, all participants' autonomy was nonexistent in the National Competencies mandate. Evans (2001) warns that this kind of approach leads to a devaluing of educators and their practices:

Efforts to improve schools' accountability via statewide competency testing and curriculum mandates also dismay teachers, because they diminish their autonomy and deprofessionalize their work. Some critics of schools are convinced that such trimming of teachers' freedom is precisely what is needed, that external pressure is required to improve and direct their performance. But to the extent that these efforts make teachers more like assembly line workers, they are likely to generate resistance—active or passive—not enthusiasm. (Chapter 5, section 3, para. 6)

Therefore, educator autonomy is essential to achieving educators' compliance with the mandated school reform.

The literature identified instructor resistance as a common reaction to a top-down reform mandate. However, findings of this study contradicted the literature as the data

did not reveal participants' perceptions of resistance to the National Competencies. Rather, there was a consensus among participants that the reform had to be done and educators were expected to do it. This expectation may have provided a positive perspective to the mandated reform, as participants recognized their colleges were dependent on the educators being at the forefront of this change. Educator success would ultimately lead to the success of the program, and, in some cases, prevent the closure of their college. Participants also unanimously acknowledged the necessity of the reform in achieving higher standards in dental hygiene education. As the participants recognized the value of the National Competencies, they did not resist this document. Evans (2001) asserts that people accept change if it is meaningful and further notes that: "People must discover their own meaning in such changes before they can accept them" (Chapter 2, Section 2, para. 10). Therefore, the lack of resistance expressed by participants was a result of some characteristics of the National Competencies reform that the participants found to be positive and meaningful.

Despite the overall acceptance of the reform itself, negative perspectives of the reform process did emerge from the data, most particularly pertaining to competition among educators. Participants identified the need for more networking and collaboration with colleagues not only among other colleges in Ontario, but also on a national level. However, there were identified deterrents for collaborative initiatives during the reform due to competition among private dental hygiene colleges. The data revealed that failure to successfully implement the National Competencies by the mandated deadline would result in closure of private colleges, which further enhanced educators' reluctance to

share knowledge. The competition described by participants reflects Hargreaves and Fullan's (2012) conceptualization of competition:

We certainly have seen many bad forms of win-lose competition that include self-centeredness, widespread cheating, divisive effects of performance-based pay, envy and jealousy, unwillingness to offer assistance to struggling neighbors, and, like a spoiled child, finding yourself all alone with no one to share all your expensive toys (books, interactive whiteboards, sporting facilities, or highly skilled teachers) when you keep all your goodies for yourself. (pp. 142-143)

Though participants from the community colleges did not describe the lurking threat of college closure, their narratives still revealed frustrations with the disconnection and competition among fellow faculty. These participants, most particularly part-time faculty, described the challenges of not knowing what is being taught in their own colleges.

Despite a desire to create a more open and collaborative approach to implementing the reform, participants recognized the college leader as being responsible for driving the mandate and establishing how the mandate would be implemented in their college. Evans (2001) suggests school reform most often entails a top-down mandate where leaders use coercive measures to drive educators to implement a desired outcome:

The methodology for innovation is almost entirely top-down in nature, a combination of dissemination and pressure. There may be much lip service paid to 'participation,' but this usually means getting people to 'go along,' to have a 'sense of ownership.' The implementation goal is to have staff adopt the expert plan as is. This requires explanation, persuasion, training, and incentives; if these

fail to produce the proper results, it requires mandates, requirements, and policies.
(Chapter 1, Section 2, para. 4)

This type of mandate contravenes educators' personal capacity building as it does not permit educators to take part in creating the innovation. As Mitchell and Sackney (2011) assert: "Extending personal capacity requires the educator to move from reflection and analysis (deconstruction) into action (reconstruction). This sort of movement positions educators as active creators of knowledge, not simply as passive consumers of knowledge that has been created elsewhere" (pp. 35-36). Hargreaves and Fullan (2012) also challenge the authenticity of change when teachers' power is limited by leaders: "Authentic professional collaboration is doubtful when it is based on external agendas that administrators decide, at times of their choosing, and in relation to purposes in which teachers have no control, such as test score thresholds" (p. 125). Evidently, the few leader-driven collaborative initiatives were limiting with respect to dental hygiene educators. An example provided by participants included the online dental hygiene collaborate website open to administrators of private colleges to post curriculums during the reform. This not only caused a barrier with private colleges but also failed in creating collaboration among educators.

Participants expressed that they had little to no knowledge of what was being taught in other classes within their own college due to deficient communication between educators. Mitchell and Sackney (2006) assert the school leader, the principal in their study, is responsible for creating open communication within their learning community.

In traditional schools, teachers are typically concerned with their own work and pay scant attention to what happens in other classrooms. By contrast, in a

learning community, the collaborative environment and the centering role of the principal raise awareness levels about current practices, new possibilities, and ongoing challenges throughout the school. (p. 633)

However, participants did not identify college leaders or administrators as responsible for opening lines of communication among educators as information was often not disseminated by leaders and administrators. Rather, participants suggested that dental hygiene educators must themselves take responsibility for opening communication. This requires the breaking of traditional bureaucratic structures for educators to take on a role traditionally identified as being accomplished by college leaders. As Tichy and Cohen (1998) state: “Though the specific forms may be different, the underlying premise is the same: Bureaucracy stifles people's ability and desire to lead” (p. 29). Therefore, a flattening in organizational structure of dental hygiene education might help to establish communication within their learning community.

Accessing knowledge was described as a challenge by all participants. Some improvement in this was noted after the reform and closure of colleges that did not meet expected standards. However, the data revealed a consensus that obtaining information was challenging, especially outside of their college. Furthermore, participants suggested not all dental hygiene educators have equal knowledge of the National Competencies and the expected outcomes of the reform. Despite the National Competencies being an initiative to standardize dental hygiene education, educators’ dismissal from developmental stages of the reform and lack of collaborative initiatives were identified by participants as creating knowledge gaps among educators. Participants described the need to know what was happening in other colleges within Ontario and other provinces.

This supports Senge's (1990) assertion that "team learning" is essential for organizational learning. Not only is accessing knowledge important from a team learning perspective, but it also leads to commitment in school reform.

School reform requires educators to experience loss in giving up old ways to implement the mandated change. As Cohen and Tedesco (2009) contend:

Competing values come to the surface, conflict emerges, loss becomes real, and individuals have to change what they are doing and how they are thinking.

Clearly, making progress on identified adaptive issues lies at odds with our culture of individualism in dental schools and in higher education in general...Because of resistance to loss, creating an environment in which others begin to engage becomes essential. (p. 8)

Despite Cohen and Tedesco's assertion that loss during reform leads to resistance, improvement in educators' knowledge access can provide what instructors need to create a solution to their loss. As Evans (2001) states, "Although change usually represents loss, from such loss comes not only despair but also innovation. Indeed, despair is often the root of innovation" (Chapter 4, Section 2, para. 3). Therefore, knowledge overcomes loss and creates change.

This study revealed that the participants' perceptions of identity included professional identity, vision, valuing, educational background, and quality of graduates. Tichy (1983) describes these elements as a cultural system that makes up the values and norms of the members of the organization. The literature concurs that cultural changes are needed for organizational reform. Hargreaves and Fullan (2012), for example,

explain that the “right drivers” of the reform must tackle a change in culture to achieve a successful system:

A big difference between successful systems and unsuccessful ones is that the former have a clear sense of direction and a high degree of coherence, and an interconnected set of policies and strategies as well as an embedded culture of improvement that provides that direction and coherence. They have what we called the right drivers for change. The wrong drivers change the surface, whereas the right drivers change the culture, as we explained in our example of inserting individualistic teacher appraisal schemes into negative school or system cultures. (p. 175)

However, the literature credits the school leaders as being responsible for building cultural change within their school. As Mitchell and Sackney (2006) contend:

The direct involvement of the school principal is central to the successful development of a culture and a set of systems that sustain a community of learners.... The principals' involvement, we have discovered, unfolds through the performance of four functions: center, holder of the vision, builder, and role model. (p.631)

Leaders are also recognized for changing culture based on who is permitted into the organization. From a business organization perspective, Tichy (1983) reflects on the potential to change the culture by changing the hiring criteria:

The modification of culture will be largely dependent on how the human resource management systems are used to shape and mold the changes. New hiring criteria will be needed to culturally screen people as they enter organizations;

development programs will need revamping as will appraisal systems which reflect the desired culture of an organization. (p. 46)

This theory was reflected in this study as participants identified the challenges of colleagues who are deficient in knowledge and need to improve their professional competence. This may also be extended to participants' perceptions of the diminished standards of students entering the programs and graduating. Narratives indicated that students entered the program from high school with a lack of foundational knowledge, and suggested that dental hygiene colleges should be more selective with applicants. However, this poses a challenge for private colleges that need to generate income from student enrollment, and with fewer student applicants due to the flooded dental hygiene job market, there are fewer applicants to select. Therefore, Tichy's suggestion for culturally screening people entering the organization does not take into consideration the limitations in selection or supply and demand of applicants.

Research participants recognized the importance of cultural influence on their profession, including the need to build a shared vision, identity, and value for dental hygiene educators. Senge (1990) recognized the value of developing a shared vision: "When there is a genuine vision (as opposed to the all-too-familiar 'vision statement'), people excel and learn, not because they are told to, but because they want to" (p. 9). The data generally described the task of building vision as being accomplished by dental hygiene practitioners. Tichy (1983) asserts the process of open systems planning where key people in the organization come together to develop a core mission that may be used to solve the organization's current and possible future challenges. The narratives of this study focused on the needs of the educators themselves, who may be regarded as the key

people. However, with the current bureaucracy of dental hygiene education, structural barriers were identified as deterrents of the communication and collaboration required for building cultural practices, including vision.

Perceptions of identity were an area where participants described feelings of uncertainty. Narratives described frustration with the public opinion of the dental hygienist as a cleaning lady. Participants agreed that there is a need for clarification regarding dental hygienists' identity. This need was not limited to the identity of dental hygiene educators but to all dental hygiene practitioners. One of the goals for publication of the National Competencies document in addition to other evidence-based documents published by the national dental hygiene association was to establish a professional identity (Lawlor, 2013). However, participants of this study continued to voice their uncertainty surrounding their identity after the publication of the National Competencies document. Narratives did not credit the National Competencies in contributing to any advancement or credibility of dental hygienists' identity. Furthermore, participants suggested that discussions and conversations as educators and as a profession generally need to take place in order to establish the professional identity. Standardizing dental hygiene education at the degree level on a national basis was also suggested for the future identity of dental hygiene.

Implications of the Study

Research participants were from private and community dental hygiene colleges, and of diverse teaching and subject assignments. Despite the diversity among participants, common themes emerged from their narratives that identified what they felt was needed to build personal capacity during the National Competencies curriculum

reform. The common themes suggest some implications for theory, educator training and practice, educator identity, and future research.

Implications for Theory

The conceptual framework developed to investigate how the National Competencies curriculum reform impacted dental hygiene educators' personal capacity was based on Mitchell and Sackney's (2011) capacity building model. The chosen indicators for this framework included building knowledge, practice, and self-awareness. Narratives from participants were collected and analyzed for common themes that emerged from the data. The themes drawn from participants' narratives resulted in three new identifiers of personal capacity building. However, the narratives were still linked to and supportive of the original conceptual framework drawn from Mitchell and Sackney's (2011) identifiers.

The new themes were used to build a visual theoretical model to reflect a general theory that is supportive of Charmaz's (2008) conception of grounded theory design. These themes included (a) perceptions of structural influence, (b) perceptions of learning access, and (c) perceptions of identity. These themes constitute a theoretical framework that answers the overarching question of this study: How do dental hygiene educators in Ontario describe the task of building personal capacity to implement and evaluate the National Competencies? The visual model that describes the grounded theory developed in this study is presented in Figure 2. This visual model demonstrates the perceptions of building personal capacity and the tasks linked to these perceptions that can create sustainable change.

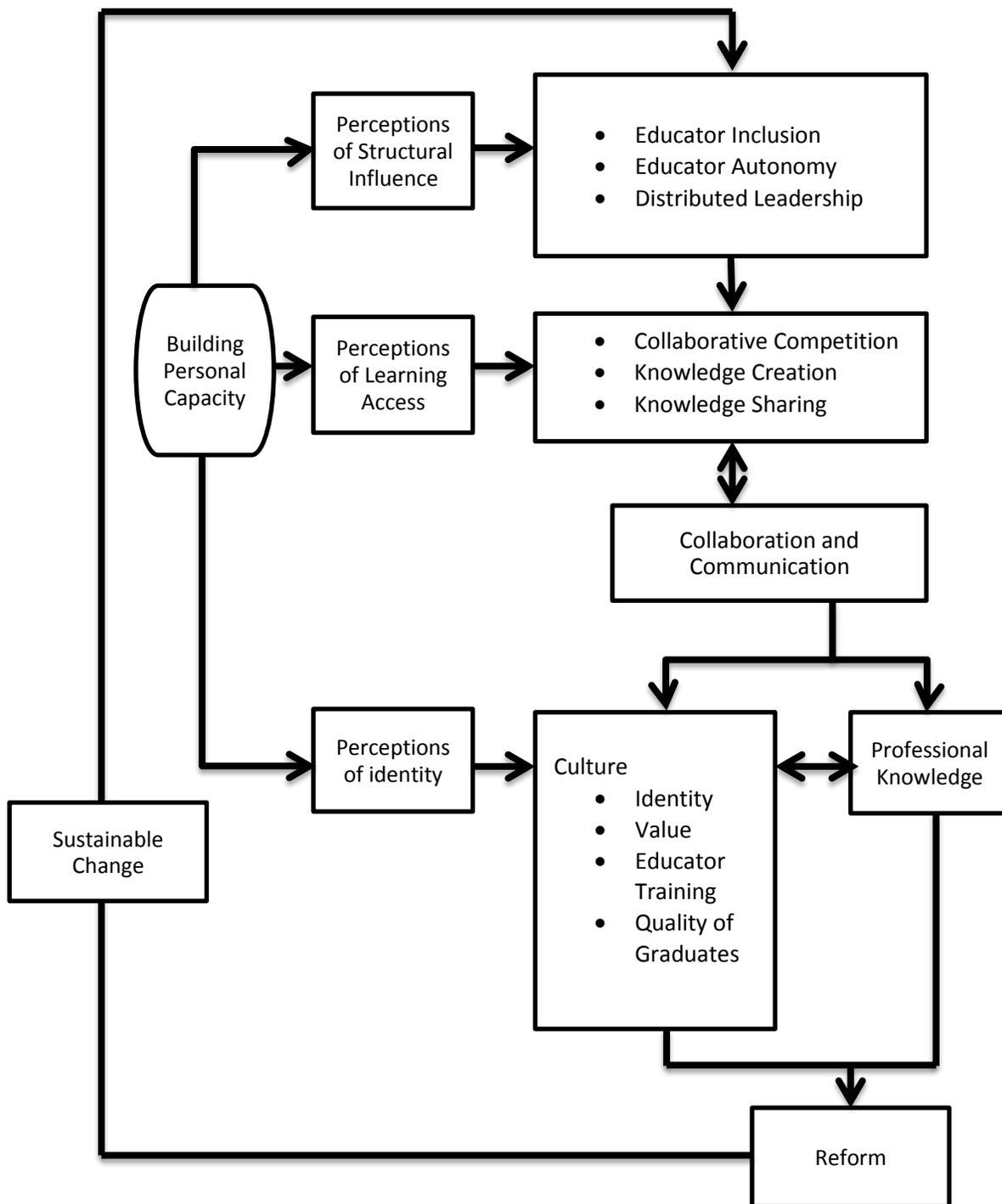


Figure 2. Theoretical Framework of Educator Personal Capacity Building during Curriculum Reform

With respect to perceptions of structural influence, participants described more educator-centered initiatives in achieving sustainable change whereas the literature recognized leaders as the driving force behind school reform. In order for educators to be recognized, leaders need to overlook their colleges' rigid structures and acknowledge the embedded values of the individuals who comprise the organization. This recommendation is drawn from participants' recognition of the deterrents of current structural influences on building personal capacity, and their perceptions of the need for educator inclusion, autonomy, and leadership during school reform.

Participants' perceptions of learning access affirmed the value of knowledge creation and sharing that may be accomplished through collaboration and communication with educators within their college and from other colleges across Ontario and Canada. Participants were not resistant to the reform as they valued the purpose of the National Competencies document, but they concurred that isolated competition among educators was not favourable.

Narratives indicated the need for communication with other educators in order to compare methods of implementation and evaluation of the National Competencies in the spirit of "collaborative competition" (Hargreaves & Fullan, 2012) that is accomplished on a collective basis, and that communication should include all members of the organization as well as members in collegial organizations.

Perceptions of identity were also dependent on collaboration and communication among educators in order to achieve common cultural practices, including dental hygienists' identity and values. Despite the literature describing the National Competencies as establishing professional identity, participants described the need for

further discussions among educators to build a solid foundation. Education training and quality of graduates in the profession were also areas of discussion and the need for building professional knowledge was described for both educators and graduates.

The data in this study suggest that all the tasks associated with the three themes in the theoretical model are required for building personal capacity during school reform. Despite the narratives being somewhat educator-centered, the theoretical framework demonstrates the interconnectedness among educators, leaders, and the organization. Although the purpose of this study was to identify perceptions of educators' personal capacity building, aspects of interpersonal and organizational capacity were also reflected in the results. This confirms Mitchell and Sackney's (2011) assertion that a "learning community develops in response to building capacity in three domains: personal, interpersonal and organizational" (p. 20). The data from this study verify that in order to achieve the task of building personal capacity, capacity building in the other two domains must also be recognized.

Implications for Educator Training and Practice

Despite the nature of their own educational training, participants identified the university degree entry-to-practice credential as a means of standardizing and perhaps unifying the general profession on a national level. However, these perceptions were described as expectations of other provinces, and not the expectations of the participants themselves. The degree was not identified as a need clinically practice dental hygiene; yet, all participants had at their own choosing completed a university degree at minimum. Although they did not see the degree as essential for practicing as a dental hygienist, they concurred that higher education improves the standards of the general profession. These

findings present a paradox of perceptions toward the dental hygiene profession and practice. However, all participants recognized higher education as a means of improving professional identity and unifying the profession for collaboration and communication: practices that are recognized as essential to building personal capacity in this study. Therefore, this shared perception supports the standardization of dental hygiene education at the university degree on a national level.

Overall, participants described the need for collaboration as a necessary access point to knowledge and learning opportunities. However, they were unable to suggest an exact solution to this recommendation. The National Competencies were credited for having provided some inclusive opportunities for educators of colleges that survived the reform, especially private colleges, but participants saw the need for more collaboration both within and outside of their colleges, and outside of Ontario. Given that participants recognized their administration as the link of communication outside their colleges, dental hygiene educators are encouraged to advocate to their administration for more inclusive roles in networking outside of their colleges. With inclusion and collaboration being reflected in all three themes of the theoretical framework, they appear to be essential elements in building personal capacity.

Implications for Educator Identity

The top-down mandate of the National Competencies was an area of discontent among participants. The literature supports the need of distributed leadership and instructor autonomy both within and outside instructors' classrooms, yet it is the leaders who are identified as the drive behind school reform. Here enters another paradox into this study with regards to perceptions of identify as participants were not only unable to

describe concrete cultural entities, but also attributed this to the lack of openness and discussion from leaders of the bureaucratic organization. Distributed leadership in dental hygiene education would provide educators with the capacity to achieve collaboration and communication with fellow colleagues in order to build a learning community for sustainable change. As Mitchell and Sackney (2011) state: “A learning community emerges as individuals reflect on, assess, critique, and reconstruct their personal professional capacity and their capacity for collegial relations and collective practice” (p. 16). Therefore, dental hygiene educators are encouraged to voice their needs to leaders for organizational change that breaks up the current bureaucratic system and that distributes leadership among the educators. This initiative will result in the kind of communication and collaboration that participants described as being needed for achieving professional identity and other cultural practices.

The literature identifies leaders as essential to establishing cultural entities. Mitchell and Sackney (2006) contend that learning communities have a shared vision that keeps educators focused on tasks and goals of the school, and they assert that the leader holds this vision. The participants did not discuss the leaders in their perceptions of identity, but rather identified this as being established by the dental hygienists. The National Competencies were not acknowledged as giving any kind of advancement to the dental hygienists’ development of identity or vision. Educators were not given the opportunity to reflect on their knowledge of self to identify values and beliefs during the reform, and, therefore, did not identify or share a common identity or vision within their organization. As the theoretical framework demonstrates, the building of personal

capacity will require the establishment of cultural practices that contribute to a more open and collaborative system.

Implications for Future Studies

This study has introduced diverse perceptions and some uncertainties over what educators need to build personal capacity during a curriculum reform. The findings have demonstrated that the building of personal capacity is not dependent on the educator alone. Rather, it exemplified the interconnectedness of all members of the organization, including colleagues, leaders, governing bodies, and students. Therefore, personal capacity building is dependent on the interpersonal and organizational capacity building as outlined by Mitchell and Sackney (2011):

That is, one cannot build capacity in one area and expect that to suffice. Rather, there needs to be direct, sustained, focused attention on building capacity in all three areas....That is, increased capacity in one domain can put pressure for improvements in the other domains of capacity. (p. 18)

Future studies may explore perceptions of other organizational members in how they may contribute to the educators' needs of building personal capacity. As student learning is an outcome of successful reform, students and their perspectives may also be targets for investigation.

The theoretical framework of this study was developed from educators' narratives and relevant literature. Given that there were only five participants in this study, a larger sample size may be used to test the theoretical framework. Participants and organizations studied in this research were in the field of dental hygiene education. However, the theoretical framework may be utilized to investigate individuals and organizations that

are not of dental hygiene or educational fields. Future studies should be conducted to determine if the framework can be applied to other educational and noneducational organizations to identify shared and diverse practices of personal capacity building. This theoretical framework should also be investigated for its applicability to larger sample sizes or to members of organizations who identify themselves as having established a learning community.

Structural influences were described as deterrents of personal capacity building in this study. Dental hygiene education is currently in a bureaucratic structure where educators were dismissed during the national reform. The literature and narratives were supportive of distributed leadership and educator autonomy in order to achieve desired reform outcomes. Despite literature describing bureaucracy as inhibiting leadership, it also supports the school leader as establishing leadership in their instructors. Tichy and Cohen (1998) credit leaders in teaching their members leadership, and in doing so creating leaders at all levels. “An organization's current leaders are creating the next generation of leaders by teaching people about the critical issues facing their business and by teaching them how to anticipate changes and deal with them” (pp. 27-28). Future studies may explore how leaders can develop leadership in their members during an organizational reform, and compare the outcomes to colleges that retained traditional bureaucracy.

Instructors' education and training were topics that emerged from narratives. Participants described the need for dental hygiene educators to improve their knowledge of the National Competencies as well as their teaching subjects. However, there were no participant discussions regarding any perceived challenges of implementing the

competencies in their teaching. All participants in this study had achieved postsecondary education at the minimum university-degree level, with some form of training in education. Participants did not credit their university training in their ability to teach all competencies for the reform, but rather suggested it was their Instructor education credentials, which were diverse among participants. A study by Sunell, McFarlane, and Biggar (2013) demonstrated that dental hygienists who completed a degree after their diploma improved in critical thinking, a core competency. The authors conclude, “The differences in diploma and degree abilities appear to lie in the cognitive rather than the technical/clinical elements” (p. 119). The research of this study did not go in depth regarding participants’ perceptions of their educational backgrounds, nor did this study have any comparison as no participants for this study had credentials below the university degree, despite educator training credentials not being recruitment criteria for this study: this phenomenon in itself may be considered for future study.

This study focused on participants of specific recruitment criteria that included dental hygiene educators teaching in Ontario from 2007 and beyond. The limited literature in dental hygiene education reflects the need for future studies in this area. As Schowetter et al. (2006) state: “Studies on effective teaching behaviors in the classroom are limited in dentistry and dental hygiene, as well as in nursing and medicine, but are prolific in the arts” (p. 625). Future studies that build from this research may expand the recruitment criteria to include dental hygiene educators of backgrounds that differ from those in this study. As the focus of this qualitative research was on Ontario dental hygiene educators, future studies may be inclusive of educators from other provinces in

Canada. Future inquiries may also utilize diverse research methodology and data collection, including quantitative research.

Final Thoughts

The purpose of this study was to explore how dental hygiene educators in Ontario describe the task of building personal capacity to implement and evaluate the National Competencies. My thoughts prior to data collection were that educators would unanimously describe resistance towards the curriculum reform, as the literature supports the resistance experienced by educators during a top-down mandate. However, participants' narratives acknowledged the need for the National Competencies reform for improving dental hygiene education, though they grappled with an external reform directive that was not equally mandated among private and community college.

Despite this study's focus on educator capacity building, participants reflected on other members of the organization as well as organizational structures and their influence. These results are reflective of Mitchell and Sackney's (2011) premise that building capacity in one domain will also require building capacity in the other two domains. The literature supported organizational leaders in being the drive behind school reform; yet, the narratives of this study were focused on the dental hygiene educators and their contributions. Overall, participants described the need to have more professional collaboration and communication in order to establish areas of perceived uncertainty, most notably regarding cultural practices. Educators will need to acquire a leadership role in order to establish these. The distribution of leadership was an assertion of this study. However, it is recognized that the current bureaucratic structure must be dismantled in order to achieve this.

As I have experienced the National Competencies reform from an administrator and educator perspective, I recognize the importance of acknowledging the abilities and contributions of all members of the organization in order to achieve an organizational reform with sustainable change. Educators must be acknowledged at all stages of the reform. Dismissal of educators also dismisses their personal capacity building, which is an essential component to developing and implementing a successful reform. Without these qualities, the organizational change will be short-lived and will not be ingrained in instructors' classroom practices or student learning outcomes. With today's constantly changing external environments, dental hygiene education, like all organizations, will be continuously faced with required reforms after the National Competencies. Dental hygiene education must consider the flattening of the current organizational structure and integration of Senge's (1990) systems thinking in order to develop a community of learning, inclusive of all members, that may adapt and survive the constant external demands. It is a hope that this study may be a stepping stone in achieving this goal for survival and continual success of dental hygiene education.

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Appendix A
Legend of Acronyms

Abbreviation	Description
CDA	Canadian Dental Association
CDAC	Commission on Dental Accreditation of Canada
CDHA	Canadian Dental Hygiene Association
DHEC	Dental Hygiene Educators of Canada
FDHRA	Federation of Dental Hygiene Regulatory Authorities
NDHCB	National Dental Hygiene Certification Board
PPC	Project Planning Committee

Appendix B

Interview Guide

**Exploring Capacity Building of Ontario Dental Hygiene Educators during National Curriculum Reform.
Research Phase One 2014
Data Collection Protocol**

Educator: _____ Educator Assignment: _____

Date: _____

School/City/Town: _____

Opening Script

Good Morning (Afternoon),
My name is Laura Perri. I am a graduate student in the Faculty of Education under the supervision of Dr. Coral Mitchell, from Brock University. I am doing research in exploring dental hygiene educators' capacity building during the Entry-to-Practice National Competencies (National Competencies) curriculum reform in Ontario.

Thank you for taking the time to participate. We will be discussing some of your views about your school, the school administration, dental hygiene governing bodies, teaching and learning in the school, and your students.

Your participation for this study is completely voluntary. You may decline to answer any questions and/or withdraw at any time from the study with no consequences.

Your individual comments will not be traceable to you, and your identity will be protected at all times, so I hope that you will feel free to say what you like. Nobody but I will know who you are, and I will not write your name any place except on my sheet. I might have to write some notes for myself, and, with your permission, I would like to tape-record our conversation so that we can send you back a transcript of what we said today.

Thank you.

My first questions have to do with your educational background and work situation.

How did your education and work experience prepare you as a dental hygiene educator?

- How long have you been a dental hygienist?
- How long have you been a dental hygiene educator?
- Would you please describe your educational background?
- Would you please describe your work background?
- Where have you worked in Ontario?
- How long have you been at your current school?
- Where else have you taught?
- What courses have you taught?
- What courses do you teach now?

What is it like to work in your school?

- School goals
- Administration leadership
- Staff attitudes
- Collaborative structure – mentorship, teams, work arrangements
- New initiatives, how they affect you?

How has your work as a dental hygiene teacher been affected by the National Competencies? (What do they need to know?)

- What do you know about the National Competencies?
- What do you know about implementing and evaluating the National Competencies in your teaching?
- How do you know if you are implementing and evaluating the National Competencies in your teachings?
- Is there assistance provided in your school?
- Do you collaborate with other teachers in your school and/or other schools?

The National Competencies is made up of eight domains, divided into core abilities and dental hygiene services. The core abilities identify the dental hygienist as a: A. Professional, B. Communicator and Collaborator, C. Critical Thinker, D. Advocate and E. Coordinator. Dental Hygiene Services identify the dental hygienist as a: F. Clinical therapist, G. Oral health educator and H. Health promoter. Given this information:

How do you incorporate the National Competencies in your teaching practice? (What do they need to do?)/ (What do they need to know?)

- How do you include all eight domains of the National Competencies?
- Given critical thinking is one of the eight domains of the National Competencies, what do you know about critical thinking as a dental hygiene educator?

- How limited do you feel with critical thinking in your teaching of the National Competencies?
- How do you know if you are implementing and evaluating critical thinking, being a core competency, in your teaching?
- How have you delivered the National Competencies document to your students?
- How have you engaged your students in your implementation and evaluation of the National Competencies?
- How do you help your students achieve?

The National Competencies is national document mandated by dental hygiene governing bodies to be included in all dental hygiene education curriculums.

1. **How were you prepared to implement and evaluate the National Competencies in your teaching practice?** (What do they feel?)/ (What do they need to do?)

- What do you feel you needed to implement and evaluate the National Competencies in your teaching practice?
- How have leaders in the dental hygiene profession (lead teachers, school administrators, regulatory or governing bodies, etc.) contributed to your implementation and evaluation of the National Competencies?
- What did you do to help yourself during the National Competencies curriculum reform?
- How has your education prepared you for teaching and evaluating the National Competencies?

2. **What do you think and feel about the National Competencies curriculum reform?** (What do they feel?)

- What changes have you experienced as an educator since the National Competency curriculum reform:
 - In your school?
 - In your teaching practice?
 - For you personally?
- How have your values and beliefs influenced your implementation and evaluation of the National Competencies in your teaching?
- How has trust influenced your implementation and evaluation of the National Competencies in your teaching?
- What resistance have you experienced during the National Competencies curriculum reform?

Conclusion Questions

To conclude, are there certain things you wish for me to remember from what we talked about?

- Can you think of important points that were raised in the interview?

Do you wish to add anything else?

You will be given the results of this discussion later and you may request changes in the information that will be used for the research. Thank you very much for giving us your valuable views and time.

Appendix C
Data Analysis

Major Themes	Minor Themes
A. Structural Influence	<ol style="list-style-type: none"> 1. Isolation 2. Division 3. Program Structure 4. Administration 5. Top down reform 6. Choice 7. Necessity of reform
B. Learning Access	<ol style="list-style-type: none"> 1. Collaboration 2. Communication 3. Knowledge gaps 4. Access to meetings 5. Knowledge
C. Identity	<ol style="list-style-type: none"> 1. Identity 2. Inclusion 3. Trust 4. Vision 5. Valuing 6. Educational Background