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A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Health and Rehabilitation Sciences

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THE ROLE OF REFLECTION IN AUDIOLOGY STUDENTS'
DEVELOPMENT AS PROFESSIONAL PRACTITIONERS:
A CONSTRUCTIVIST GROUNDED THEORY

(Spine title: Role of reflection in audiology students' development)

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by

Stella Ng

Graduate Program in Health and Rehabilitation Sciences

A thesis submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

The School of Graduate and Postdoctoral Studies
The University of Western Ontario
London, Ontario, Canada

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THE UNIVERSITY OF WESTERN ONTARIO
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Abstract

Audiology is a young health profession striving toward a value for and use of evidence-based practice (EBP). Currently within audiology, there is a lack of attention to a complementary epistemology of practice; that is, one that explicitly values experience as a valid and important source of knowledge, worthy of theoretical and empirical scholarly attention. The current study addresses this gap using a constructivist grounded theory approach to explore the research question: How is reflection enacted and implicated in audiology students' development as professional practitioners?

A total of 18 participants contributed data to this study (13 audiology students from a single cohort, three clinical faculty members, and two clinical supervisors). Methods included elicitation of guided written reflections from student participants and intensive interviews with students and clinical faculty/supervisors. These methods were repeated three times, from the beginning of the students' graduate audiology education into their first two to four months of professional practice. Constant comparative analysis was performed and reflexivity emphasized.

A constructivist grounded theory of the evolving practitioner, supported by reflective processes, posits the following and their relationships: 1) reflection as a window into the student/new practitioner experience, 2) reflection as a tool for students/new practitioners, 3) the nature of reflection as a developing behaviour, and 4) audiology students' evolution as professional practitioners. This theory may be referred to as Reflection in the Education and Socialization of Practitioners: Novice Development (RESPoND).

This work offers a contribution to the empirical literature on reflection and reflective practice in the health professions and to the sparse body of literature on audiology education. Implications, strengths, and limitations are discussed and next steps for related research suggested.

Keywords

audiology, reflection, reflective practice, professional education, professional development, professional socialization, professional practice knowledge

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List of Abbreviations

ABR: Auditory Brainstem Response
AR: Aural Rehabilitation
AuD: Doctor of Audiology
CPBDL-A: Comprehensive Professional Behaviours Development Log -
Audiology
CSD: Communication Sciences and Disorders
EBP: Evidence-based practice
ENT: Ear Nose and Throat physician (otolaryngologist)
ID: Participant identification number
IHP: Infant Hearing Program
RESPOND: Reflection in the Education and Socialization of Practitioners: Novice
Development
SLP: Speech-Language Pathology
SMART: Specific, Measureable, Action-oriented, Realistic, and Time-Constrained
QDA: Qualitative Data Analysis
VRA: Visual Reinforcement Audiometry
Western: The University of Western Ontario

Preface

In facilitating a course with a cohort of audiology and speech-language pathology students, I kept a blog through which I shared my reflections of professional and teaching experiences with students. Before the course even began, I wrote one reflection following a series of “snow days,” in which the school board for which I worked closed all schools due to inclement weather, for a number of days. This decision was met with much controversy, sparking my reflective blog about the difficult decisions people “in power” must make when faced with situations that have no straightforward “right answer.” In a sense, this blog post represented critical reflection, and anticipatory reflection, as I envisioned what the course would achieve and promote for students. At the end of the course, I shared this initial blog post again, coming full circle as we celebrated the success of the course. We had built a community experience that would hopefully support years of lifelong learning. The connection to my dissertation was not so clear at the time, but as I searched for a fitting quotation to preface this body of work, I came back to this blog post, which I share in part with you here. It may be unusual to have as much personal reflection in an academic dissertation as I have included in mine. However, in the course of this dissertation, I learned, and in turn must emphasize, the value of personal and professional experience as an equal counterpart to science and technique as a source of knowledge. As such, this dissertation draws heavily on multiple sources of knowledge: the theoretical, the empirical, the substantive, the professional, and the personal.

December 8, 2010 – Instructor’s Blog:

...At the end of this snow day, I realize that teaching Professional Issues is about helping you all reach the point of understanding that practice is not black and white, and that this greyness, and the need for artistry to navigate the swamp...is to be embraced. Seeing practice in shades of grey, realizing that our strong opinions are sometimes met with equal and opposing forces, and engaging our professional artistry to do the best we can for clients when there is no known "best practice"...this is what makes us professional practitioners...

Glossary

| Concept | Definition | Reference |
|---------------------------------|---|---|
| Anticipatory reflection | Reflection that occurs in anticipation of a specific situation or systemic, task-oriented reflection in the context of planning ahead. | (Kinsella, 2000; Van Manen, 1991) |
| Constructionism | In contrast to the individualistic nature of constructivism defined below, constructionism involves the social world as source of meaning-making and emphasizes interactions and interpretations between human beings and their social worlds. | (Crotty, 1998) |
| Constructivism | Epistemological position that holds that individuals experience world uniquely, constructing knowledge that is in flux rather than found in static form. In terms of practice, practitioners make meaning based on reflective conversations that they hold with the materials of their situation, which results in a remaking of the practitioners' practice world. | (Goodman, 1978; Kinsella, 2006a; Schön, 1987) |
| Critical companion | A dialogic partner, who promotes one's reflective thinking through listening, enabling, challenging, critical questioning, and supporting development and growth. | (Higgs & Titchen, 2001; Johns, 1984, 2002). |
| Critical reflection | A critique of <i>assumptions</i> about the content or process of problem solving, or making a taken-for-granted situation problematic, raising questions regarding its validity and recognizing the role of power. Focuses on systemic and social issues through multiple lenses. | (Brookfield, 1998; Mezirow, 1990) |
| Eudaimonia | An Aristotelean concept, which in health professional practice has been defined as genuine happiness and human flourishing for the patient, "whatever that means for the individual patient/client" (p. 255). | (Flaming, 2001) |
| Guided reflection | Reflection that occurs in collaboration with a mentor, peer, or critical companion. | (Johns, 2002) |
| Indeterminate zones of practice | The uncertain, unique, and value-conflicted situations of practice, in which technical problem solving may not be sufficient. Indeterminate zones of practice are central to professional practice. | (Schön, 1987) |

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| Knowing-in-action | Intelligent action we demonstrate, which is publicly observable, with the knowing residing <i>in</i> the action. | (Schön, 1983) |
| Phronesis | An Aristotlean concept, phronesis is deliberation about values with reference to praxis (theory to practice). Phronesis is pragmatic, variable and context-dependent, oriented toward action, and based on practical value-rationality. Phronesis is related to ethics, but is not analogous to it; there is no modern-day analogous term. Phronesis provides a complementary conception to research-based practice. | (Flaming, 2001; Flyvbjerg, 2001; Kinsella, 2001) |
| Professional artistry | “A high-powered, esoteric” type of competence exhibited in everyday acts of “recognition, judgment and skilful performance.” | (Schön, 1987, p. 22) |
| Reflection | “Active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and further conclusions to which it tends.” | (Dewey, 1910, p. 6) |
| Reflection-in-action | Reflection in the midst of action without interruption or temporal delay; our thinking reshapes what we are doing as we are doing it. | (Schön, 1987) |
| Reflection-on-action | Intentional reflection on action of the past, to make sense of the action and possibly learn from it, thus a way of learning or generating knowledge from experience, which will potentially influence future action. Can take many forms, often written. | (Schön, 1983; Schön, 1987) |
| Reflective practice | A way of practicing, emphasizing processes of critical consideration (based on multiple sources of knowledge) and resultant improvement of clinical actions before, during, and after clinical actions take place. | (Ng, Bartlett, & Lucy, Accepted Jan 17, 2011; Schön, 1983) |
| Schön's epistemology of practice | Traditionally, technical rationality has been the dominant epistemology of practice. Schön suggests an alternate epistemology of practice, beginning with the practitioner's practice experience, including artistic, intuitive processes used to navigate uncertain, unstable, unique, and value-conflicted situations (indeterminate zones of practice). | (Kinsella, 2007c; Schön, 1983) |

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| Tacit knowledge | The often unspoken knowing that guides us in intelligent action; it is the notion that it is difficult to put into words how we know how to do certain things. | (Kinsella, 2007c; Polanyi, 1958; Schön, 1983) |
| Technical rationality | Dominant epistemology of practice in which professional activity consists of instrumental problem solving through application of scientific theory and technique. | (Schön, 1983) |

Chapter 1

1 Reflection and reflective practice: Theory and applications in audiology

Reflective practice is one of the most commonly cited topics in the broad field of professional knowledge and competence (Eraut, 1994). Professions that have discussed the use of reflective processes in the context of professional knowledge and development include business (Cunliffe, 2002), education (Boud & Walker, 1998; Schön, 1983, 1987), medicine (Kumagai & Lypson, 2009), nursing (Benner, 1984), occupational therapy (Kinsella, 2001), physical therapy, and social work (Plath, 2006). Common threads in the reflective practice literature across disciplines include its potential to bring otherwise tacit elements of practice to the surface (Higgs, Andresen, & Fish, 2004), to help professionals develop their practice knowledge and expertise (King et al., 2007), to lead to questioning of assumptions (Kinsella, 2001), and to stimulate or complement critical thinking (Gross Forneris & Peden-McAlpine, 2006; Price, 2004) and evidence-based practice (EBP: Avis & Freshwater, 2006; Mantzoukas, 2007, 2008). Yet, despite the popularity and utility of reflective practice, the hearing healthcare profession of audiology has been slow to explicitly explore the theories of reflection, evidenced by the paucity of literature on the topic within the field. In this chapter I outline the theoretical background of reflection and reflective practice and propose three key considerations in adopting the discourse for audiology, summarize early attempts to bring scholarship about reflective practice into the field of audiology, and outline potential ways to foster reflection in audiology students. I conclude this chapter by posing a research question to begin to fill the void of literature on this topic in audiology.

Different theorists and disciplines have theorized and applied reflective practice in a variety of ways, making it confusing for newcomers to navigate their way through the large body of literature. The danger in this confusion is the possibility for reflection and reflective practice to be dismissed, misinterpreted, or

oversimplified. Although most thoughtful considerations of reflective practice share the same roots, many offshoots and branches also exist (Moon, 1999). The offshoots exist, in part, because the reflection literature spans a range of perspectives and applications. Thus, it would benefit a discipline in the early stages of theorizing about reflection and reflective practice to take some time to study the theoretical foundations of these topics. A critical challenge, identified by my early attempts to discuss reflective practice in audiology, lies in framing reflection so that it is *accessible* and *appealing* to a profession strongly governed by what the father of reflective practice, Donald Schön, has called technical rationality. Technical rationality is defined by Schön as the dominant epistemology of practice in which professional activity consists of instrumental problem solving through application of scientific theory and technique. Clearly, there are many problems in practice that elude technical solution. Reflective practice is thus offered as a complementary epistemology of practice (Schön, 1983).

1.1 The origins of reflective practice

An understanding of the theoretical background of reflective practice is necessary to avoid generic and nonspecific approaches and misinformed application. Reflection and reflective practice are related but different constructs, but it is helpful to understand reflection even if one's focus is on reflective practice. Reflection is a way of thinking, which may manifest itself in learning, practice, or in one's way of being. Reflective practice is a way of theorizing about the embodied and tacit, and intentional and explicit, forms of reflection within professional practice (Kinsella, 2007b). To fully appreciate Schön's conception of reflective practice, it is helpful to understand reflection as it relates more basically to thinking, knowledge, learning, and education.

Moon (1999) identifies four main theorists, whose work she contends makes up the "backbone" (Moon, 1999) of scholarship in reflection as it relates to learning and professional development. These theorists are: educational philosopher John Dewey (1910, 1938), whose seminal work explores reflection from a

psychological perspective as it pertains to education; critical philosopher Jürgen Habermas (1971), who views reflection in an epistemological sense, as a way toward emancipation; David Kolb (1984), who positions reflection as one piece within an experiential learning cycle; and applied philosopher Donald Schön (1983, 1987, 1992), who popularized the concept of reflective practice in the context of professional practice. Redmond (2004) also includes the above four theorists in her overview of key thinkers in reflection. Of these four main theorists, only Schön focuses on reflective *practice*. Dewey, Habermas, and Kolb focus on reflective thinking in learning and education, critical reflection, and experiential learning, respectively.

Writing this chapter served as a way to discover the most resonant and relevant aspects of the reflection and reflective practice literature for audiology and for the research study. The above four theorists formed a compass, as they guided me in different directions within the vast landscape of reflection. On each excursion within the journey, I also learned about other thinkers of reflection and reflective practice, who I acknowledge in relation to the main thinker below. The following section serves as a map of reflection and reflective practice. I conclude this section with a summary of important themes of reflection as they relate to reflective practice, which will inform my work in looking at how reflection is enacted and implicated as audiology students develop as professional practitioners.

1.1.1 Dewey: Experience and reflection in education

Pragmatist philosopher Dewey defines reflective thought as “Active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and further conclusions to which it tends ...” (Dewey, 1910, p. 6). Dewey suggests that without reflection, action is merely impulsive and self-serving. The two sub-processes of reflective thinking include: 1) a state of perplexity, hesitation, or doubt and 2) an investigation to support or disprove the suggested belief (Dewey, 1910). In other words, by looking deeper into one’s uncertainty (echoed in Schön’s indeterminate zones of practice, discussed in

1.1.4), one can develop new insights in a process of shaping knowledge based in experience.

The two sub-processes of reflective thinking outlined above are embedded within most explorations of reflective practice, in some form. For example, Dewey's sub-processes can be found in Benner's (1984) critical incident analysis for nursing practitioners. Benner (1984) encourages nurses to reflect on experiences critical to their practice, including those that are especially ordinary, particularly demanding, or incidents that went unusually well. This suggestion aligns with Dewey's first step in reflective thinking: identifying an uncertainty. Next, these critical incidents should be reflected upon in terms of context, why the incident was critical, what the practitioner's concerns were at the time, and how one might accordingly adjust future practice (Benner, 1984). This step aligns with Dewey's second stage of reflective thinking, with the nurse or practitioner investigating the reasons for their previous uncertainty. Benner (1984) views the critical incident analysis as a way to facilitate study of expert practice and to move novice practitioners toward expert levels of practice.

Dewey (1910) suggests that when confronted with a problem, a reflective thinker reflects on theories to find a solution. These theories are based on past experience and prior knowledge. Thus, the role of reflection in the process of creating new knowledge based in experience is emphasized. Experience is an especially important aspect of Dewey's work.

In fact, Dewey (1910, 1938) proposes an educational philosophy based in experience, and criticizes the "traditional" education system of his time. Dewey's (1938) philosophy of education involves two related components. First, Dewey discusses continuity; for an experience to be educationally worthwhile, it must in some way have a long-lasting impact on the learner. This prerequisite is called *continuity of experience*. Second, Dewey emphasizes interaction; the interaction of *objective conditions* (such as knowledge of experts) and *internal conditions* (such as knowledge from personal experience) are necessary to make an

educational experience valuable. That is, an educational experience in which a student actively learns and acquires meaningful knowledge, rather than passively receives information, is necessary for a successful learning experience that will have longevity of impact. Dewey's (1938) educational philosophy of experience is an early example of a call for consideration of various sources and alternative conceptions of knowledge in education.

Dewey's (1910, 1938) philosophy of education may thus be credited with positioning experience in the center of learning and highlighting reflection (including reflection on experience) as a crucial step in learning, acquiring, and creating knowledge. These are ideas that Kolb (1984) later developed in his model of experiential learning.

In summary, I derive inspiration from the following points relevant to reflection from Dewey's work: experience as a source for knowledge and central component of learning; and the role of reflection in transforming actions and experiences into meaningful learning and pushing knowledge to another level. These themes also recur in the work of the following three theorists and help guide my exploration of the use of reflection by audiology students developing as professional practitioners.

1.1.2 Habermas: Reflection for emancipation

Critical philosopher Habermas (1971) was part of a movement away from thinking about reflection pragmatically, toward an emancipatory ideal. Habermas served as inspiration for others, including Brookfield, Kemmis, and Mezirow, to continue to develop the concept of critical reflection (e.g. Brookfield, 1988; Carr & Kemmis, 1986; Mezirow, 1990). Critical reflection is neatly distinguished from reflection by Mezirow (1990). Mezirow (1990) states that reflection is the "process of critically assessing the content, process, or premise(s) of our efforts to interpret and give meaning to an experience," whereas critical reflection considers the "critique of assumptions about the content or process of problem solving...making a taken-for-granted situation problematic, raising questions

regarding its validity” (p. 104-5). Critical reflection places emphasis on systemic and societal conditions and more explicitly seeks change and emancipation.

As previously discussed, Dewey (1910) was concerned that action is reduced to habit and impulse in the absence of reflection. Similarly, Habermas (1971) is concerned about uncritical acceptance leading to hegemonic perpetuation.

Habermas (1971) identifies three broad areas for knowledge generation: technical, practical, and emancipatory. Technical knowledge is, most commonly, associated with empirical-analytic sciences. Practical knowledge, on the other hand, is mostly tied to “historical-hermeneutic” sciences, which are more concerned with language and meaning (Habermas, 1971). Habermas (1971) associates emancipatory knowledge with critical social science, which focuses on overcoming societal constraints and creating change. Habermas (1971) argues that it is in the third area of knowledge generation, emancipation, that critical reflection is most crucial.

From the critical reflection perspective, reflection is necessary to help reveal systematic and societal controls that otherwise obstruct freedom to acquire knowledge (Habermas, 1971). The goal of reflection for Habermas (1971) is transformation of self, personal, or social worlds. In other words, by reflecting critically, people can become aware of their assumptions and how they are being influenced by societal presuppositions. This awareness can then lead to the development of alternative social structures (Habermas, 1971). For Habermas, technical and practical knowledge are clouded by existing social structures and thus cannot lead to the same degree of change and improvement. Habermas suggests that reflection leading to emancipation is not something that empirical-analytic disciplines can readily achieve (Habermas, 1971; Moon, 1999).

In summary, Habermas (1971) was interested in uncovering and understanding meaning in practical, social science disciplines, and he differentiated this from the goals of technical disciplines. Critical reflection, or reflection upon assumptions and problematization of taken-for-granted situations (Mezirow,

1990), is thus informed by Habermas' (1971) concern with emancipatory interests as they relate to human knowledge. In audiology, critical reflection can be useful for bringing taken-for-granted assumptions and situations into light and for identifying and navigating ethical dilemmas and systemic challenges, which in my experience, can be quite significant in audiology practice settings. Although critical reflection and Dewey's pragmatic reflection are distinct, I see them as compatible and complementary. Habermas places a critical lens on reflection, and his work can be applied to professional practice.

1.1.2.1 Critically reflective practice

Brookfield (1998) theorizes about critical reflection in professional practice. According to Brookfield (1998), critically reflective practitioners constantly try to discover and research the assumptions that frame how they work. This research occurs by seeing practice through four complementary lenses: 1) one's own autobiography as a learner of reflective practice; 2) the learners' [or in a health profession, the patients'/clients'] eyes; 3) colleagues' perceptions; and 4) theoretical, philosophical, and research literature. Brookfield's (1998) discussion of theoretical literature as a lens through which to see our own practice resonates with my experience of learning of the theory of reflective practice.

Brookfield writes: "Theory helps us 'name' our practice by illuminating the general elements of what we think are idiosyncratic experiences...theory can help us realize that what we thought were signs of our personal failings as practitioners can actually be interpreted as the inevitable consequence of certain economic, social, and political processes" (Brookfield, 1998, p. 200). Before I was introduced to the literature surrounding reflective practice, I held within me many unspoken tensions about professional practice issues in audiology. I did not possess the language of reflection and reflective practice, so I doubted that what I was experiencing and how I was processing my experiences could be valid. I felt disheartened and wanted to change the status quo or at least find a way to practice optimally within it. Yet, I was unsure of how to solve the problems I was seeing, with my limited toolkit for approaching practice problems – a toolkit that I

had filled with the technical-rational tools that I had acquired in school. When I began to read Schön's *The Reflective Practitioner*, I felt vindicated. I was given the gift of a language with which to voice and explore my concerns, and with this I could begin to address some of the issues in which I was immersed. Despite my appreciation for this new ability to "name" my practice, I must state with certainty that one could not be a good audiologist without a well-equipped technical toolkit. Audiology has not widely embraced the theory of reflection and reflective practice, and will likely always rely more heavily on technical rationality, with good reason given the context of the profession's practices. Thus, in terms of accessibility and appeal to the field of audiology, Schön's epistemology of practice benefits from explanation of how reflection has been theorized in various contexts. Audiology borrows some of its theoretical basis from cognitive psychology; thus I suggest that the cognitive psychology-based "cycle" of experiential learning (Kolb, 1984) may serve my goal of making the theory of reflection and reflective practice accessible and appealing to the field of audiology.

1.1.3 **Kolb: Reflection in experiential learning**

Kolb (1984) places reflection within an experiential learning cycle. Kolb (1984) views learning as a continuous process grounded in experience, which aligns with Dewey's (1938) emphasis on experience and continuity. Kolb also views learning as tension- and conflict- laden, which corresponds with: Dewey's problems that arise in learning, Habermas' purpose for reflection in the development of emancipatory knowledge, and Schön's (1983, 1987) indeterminate zones of practice to be discussed below.

Kolb (1984) suggests that learners require four types of ability to effectively learn: concrete experience abilities, reflective observation abilities, abstract conceptualization abilities, and active experimentation abilities. For Kolb (1984), reflection mainly serves as part of the experiential learning process; but, his writing has clearly been identified as part of the history of reflection and learning theory (Moon, 1999). Kolb (1984) explores the relationship between knowledge

and learning; to understand learning, we must understand what constitutes knowledge, because knowledge is the outcome of learning. In this way then, we must be able to envision knowledge that is borne of personal and professional experience, and not only knowledge that is derived from scientific research evidence.

I agree with Moon (2004) who suggests that Kolb's experiential learning cycle, while highly popular, is neither complete nor self-sufficient. However, I believe the cycle is an important starting point for audiology because it is a well-known, practical theory derived from a cognitive psychology perspective, that positions reflection clearly within the process of experiential learning. Building on Kolb's work, Moon (2004) summarizes seven points that characterize experiential learning: 1) it is not usually 'taught' in a traditional sense; 2) rather, the material of learning is usually direct experience; 3) it is potentially more meaningful, potentially empowering due to the way experiential learning is used; 4) reflection is either deliberately or unintentionally involved in most cases of experiential learning; 5) action is involved; 6) feedback takes place; 7) it involves formal intent to learn. The fourth point above is worth expanding upon. Reflection is intertwined with experiential learning, and arguably, is necessary for optimizing experiential learning. However, reflection can take place outside of experiential learning. For example, reflection on pre-existing knowledge and ideas can make them deeper and more meaningful (Moon, 2004).

Kolb (1984) emphasizes that learning is a process that should not be measured in terms of finite outcomes because of its dynamic nature. Drawing from Dewey (1938), Kolb (1984) states that ideas are formed and re-formed through experience and that no two thoughts are ever the same, because experience intervenes. Kolb (1984) suggests that rather than memorizing knowledge and allowing the knowledge gained to remain static, we should aim to continually learn through experience. Further, learning is actually an act of re-learning and ever-changing and expanding learning, in that we do not start out in learning experiences as blank slates. Indeed, Kolb (1984) suggests that the process of

learning is centered on a resolution of conflicts between opposing views, is intricately tied to the environment of the learner, and results in new knowledge.

In summary, Kolb's experiential learning theory is helpful because it emphasizes that reflection on its own, or experience on its own, is insufficient for effective learning. Relating this to professional practice, reflection plays a role in bringing together theories and past actions to (re)conceptualize practice, or to develop professional practice knowledge by making meaning from experience. The active experimentation phase of Kolb's learning cycle involves the testing of newly learned or developed theories. Moon's (2004) work helps relate and distinguish experiential learning and reflection. Experiential learning always involves some form of external experience, whereas reflection can take place without any external input, but with an entirely internal experience (Moon (2004) calls this cognitive housekeeping). Experiential learning usually involves reflection, and reflection is important to experiential learning, but reflection is separate in that it can occur without "new" material. That is, we can reflect on what we have already learned (Moon, 2004). The challenge with this relationship is that to reflect on what we know likely transforms the pre-existing knowledge, thus becoming a learning experience itself. Schön helps us distinguish reflection on an existing experience or prior knowledge from reflection as a part of a new or ongoing learning experience; his theory of reflective practice is discussed next.

1.1.4 Schön: Reflective practice

1.1.4.1 Tacit knowledge, knowing-in-action, and professional artistry

An important feature of Schön's theory of reflective practice is tacit knowledge, a form of knowledge discussed in detail by Polanyi (1958). Tacit knowledge is defined as the often unspoken knowing that guides us in intelligent action; it is the notion that it is difficult to put into words how we know how to do certain things (Schön, 1983). The aim of Polanyi's (1958) writing is to bridge dichotomies that existed within conceptions of knowledge (for example, between subjectivity and objectivity, explicit and tacit knowledge, personal and practical knowledge).

Polanyi (1958) himself bridged a dichotomy: he trained as a chemist and he wrote as a philosopher. Schön's reflective practice is influenced by Polanyi's (1958) notions of tacit knowledge (Kinsella, 2007b).

Schön also names a tacit kind of knowing that we experience as practitioners: knowing-in-action. Knowing-in-action is similar to Polanyi's tacit knowledge, with perhaps more emphasis on the use of tacit knowledge in action. Schön (1987) describes knowing-in-action as the intelligent action we demonstrate, which is publicly observable, with the knowing residing *in* the action. For example, knowing-in-action is demonstrated by the physical act of riding a bicycle; even if we are able to skilfully perform this task, we may be unable to make the performance verbally explicit. Knowing-in-action thus occurs in the everyday practice life of a practitioner, spontaneously or automatically, but intelligently. If a practitioner encounters an indeterminate zone of practice (an uncertain, unique, conflicted, and challenging practice situation), professional artistry may come into play. Schön (1987) explains professional artistry as a "high-powered, esoteric type of competence" exhibited in everyday acts of "recognition, judgment and skillfull performance" (p. 22). Professional artistry is the competence used by practitioners to handle indeterminate zones of practice, and is rigorous in its own right (Schön, 1987).

1.1.4.2 Epistemologies of practice

For Schön (1983, 1987), reflection is necessary because technical rationality alone is insufficient to provide practitioners with solutions to the indeterminate zones of practice. Well-formed problems that do lend themselves to technical rationality tend to occur on what Schön calls the high, hard ground of professional practice. However, Schön (1983, 1987) observes that many important professional practice issues defy technical solution; researchers and practitioners are often wading in a swampy lowland (Schön, 1983) of professional practice, where reflection is necessary to identify and solve complex problems. In order to navigate this swamp, practitioners need to be equipped with an epistemology of practice (Kinsella, 2007b, c). In Schön's (1983, 1987)

epistemology of practice, he has turned the relationship between research knowledge and professional practice “upside down,” focusing first on the question of what we can learn from professional artistry, instead of the more common question of how we can better make use of research knowledge (Kinsella, 2007c).

1.1.4.3 Summary of Schön’s reflective practice

Kinsella (2007b) suggests that tacit knowledge, knowing-in-action, and professional artistry are key aspects of Schön’s (1983, 1987) theory of reflective practice, inspired by Polanyi (1958). Schön draws from Polanyi’s tacit knowledge in his alternative view of professional knowledge. Schön argues for the need to make tacit knowledge explicit in order for practitioners to improve their practice. Thus, Schön proposes knowing-in-action as a way to theorize the tacit knowledge that practitioners use in their everyday practice. Finally, Schön describes professional artistry as one way that practitioners can approach practice, especially in the indeterminate zones of practice that often defy technical rationality (Kinsella, 2007b). An important element of Schön’s theory, the distinction between reflection-*in*-action and reflection-*on*-action, is discussed in Section 1.2.3.

1.1.4.4 Schön’s constructivist perspective

Schön discusses knowledge from a constructivist perspective (Goodman, 1978; Kinsella, 2006a, 2009; Schön, 1983, 1987): “When practitioners respond to the indeterminate zones of practice by holding a reflective conversation with the materials of their situations, they remake a part of their practice world and thereby reveal the usually tacit processes of worldmaking that underlie all their practice” (Schön, 1987, p. 36). We can attempt to make our tacit knowledge and knowing-in-action explicit, but Schön states that our descriptions of our knowing-in-action will always be constructions, or explicit, symbolic representations of tacit knowledge. Knowing-in-action is dynamic, but facts and procedures are static (Schön, 1987).

An understanding of the constructivist perspective that informs Schön's work helps in developing an appreciation for what Schön offers. For Schön, shifting from an objectivist to constructivist view of practice makes terms such as "truth" and "effectiveness" problematic. Truths and effectiveness are only relevant within a frame, or in other words, within given assumptions about what it means to know. "With their different ways of framing the situation, [different professions] tend to pay attention to different sets of facts, see "the same facts" in different ways, and make judgments of effectiveness based on different kinds of criteria" (Schön, 1987, p. 218). An inflexible and restrictive frame may make it difficult to work productively with other professionals, who may be operating within a very different frame. A constructivist view of knowledge draws attention to the significance of reflective practice and professional artistry in the very context-specific lives of professionals and their patients/clients.

1.2 The backbone of reflective practice: Three important themes for audiology

1.2.1 Non-dichotomous epistemological perspective

Schön's work is perhaps most famous for its critique of technical rationality (Eraut, 1994), which is often interpreted as creating a dichotomy (Moon, 1999). Yet, Kinsella (2007c) suggests that rather than creating a dichotomous portrayal of technical rationality versus an epistemology of practice, Schön actually works to overcome such a divide. Schön (1983) suggests that we turn the problems of professional practice upside down. In other words, we could reflect on the experiential and contextual elements of practice, in order to set the frame of a problem, before we attempt to solve problems in a technical-rational manner. Indeed, this approach is very different from a dichotomy. Schön (1983) does not suggest that we rid ourselves of technical rationality, but rather that in many cases, we consider and value alternative ways of approaching practice.

The discipline of audiology stands to benefit from a view that practitioners should value knowledge grounded in practice, what Schön (1983) calls an epistemology

of practice, as a complement to technical or research-based knowledge. Although Schön (1983) tentatively suggests that 85% of the problems of practice lie in indeterminate zones and are better served by artistry than technical solution, this may not be the case in audiology. Audiology is a profession in which science and technology contribute very significantly to good hearing healthcare. Still, practice that too rigidly relies on technical rationality and overlooks affective aspects of patient/client care leaves the patient/client less satisfied and with sub-optimal outcomes (Berg, Canellas, Salbod, & Velayo, 2008). Following the summary of a three key themes of reflective practice, I reflect on common audiology cases that demonstrate the limitations of technical rationality as a sole approach to competent professional practice.

Schön (1987) viewed reflective practice as a bridge between the university world and practice world. Dewey (1938) was disheartened by the gap between what is taught, and what is learned through experience. He disagreed with a model of education that viewed knowledge as deposited into students (i.e. teacher feeds student knowledge), also referred to as a banking model of education (Freire, 2007). The theory-practice divide is noted as a challenge by many scholars of professional and practice knowledge (Eraut, 1995; Higgs, et al., 2004; Kemmis, 2005; Kinsella, 2001; Polanyi, 1958). Many educational settings currently struggle to overcome the dichotomy of theory versus practice. Dewey (1910, 1938), Habermas (1971), Kolb (1984), and Schön (1983, 1987, 1992) each highlight the importance of connecting theory and practice, and of valuing practice knowledge. However, it is understandable that misinterpretations, especially of Schön's work, may be perpetuated without a careful interpretation of the original texts. Toward my goal of making reflective practice accessible and appealing to audiology, the concept of a non-dichotomous epistemology of practice is crucial.

1.2.2 The importance of experience to learning: Experience as a valid source of knowledge

The centrality of experience in education and learning began with Dewey (1938) and his philosophy of experience for education. For Dewey, experience is vital to education. Kolb (1984) is credited with popularizing and theorizing experiential learning and he defines learning as “the process whereby knowledge is created through the transformation of experience” (p. 38). He notes that this definition highlights the experiential learning perspective, by emphasizing adaptation and learning as opposed to content and outcomes. Further, the transformative process of knowledge, or the creation and recreation of knowledge, is highlighted in this definition. This definition of learning also contrasts with a model of education in which knowledge is acquired, transmitted, or deposited finitely. Such a model was opposed by Dewey (1938) and others (notably, Freire, 2007).

Schön (1983) also envisions a practice world that prioritizes the practitioner's experience, with his call for an epistemology of practice. Schön (1992) discusses reflecting -in and -on practice experiences, implicating active, dynamic process for improving practice, informed by both pre-existing knowledge and in-action discoveries.

Although experiential learning can occur without our conscious awareness (Kolb, 1984), making it explicit can help us become more aware of the process and attend more carefully to potential experiential lessons, thus improving the effectiveness of the learning experience (Kinsella, 2001). Reflecting on experience can result in new perspectives (Atkins & Murphy, 1993), novel action (Eraut, 1995), and transformation (Habermas, 1971).

This theme is important for audiology because audiology is a profession that is striving for EBP as a guiding theory (Cox, 2005; Moodie, Johnson, & Scollie, 2008; Palmer, 2006). Evidence-based practice is important but in itself is insufficient; thus the explicit, scholarly exploration of experience as a source of knowledge is crucial to the balanced growth of the profession. Reflective practice

offers a way to consider experience as a source of knowledge for practice, complementary to EBP's critical appraisal of research evidence.

1.2.3 The need for and role of action: Pushing boundaries through dynamic knowledge creation and use

There are two types of action that I describe in this section. First, I discuss action in a critical, emancipatory sense. Habermas (1971) stresses the importance of using knowledge to guide action, change, and transformation. According to Van Manen (1977), Habermas offers educators an intellectual form of practical reasoning and action, rooted in emancipatory concern; his perspective is capable of linking knowledge, theory, practice, and action, all centered on human interests. For Habermas (1971), action means significant change, at a personal and social level. Indeed, for the critical reflection theorists informed by Habermas (e.g. Brookfield, 1988; Mezirow, 1990), reflection can be used as a tool for questioning assumptions (which can lead to action), transforming perspectives, overcoming system- or society-imposed oppression, and ultimately improving one's personal and practice life. I mention this as a key element of reflection for audiology because I believe in the importance of questioning assumptions, challenging status quo, and advocating for change, if we are to foster practices that best support our patients/clients and satisfaction of audiologists. That is, reflection can have the power to spark change, if action is taken based on the important knowledge created through reflection upon perturbations of practice or professional issues. In the absence of reflection, such perturbations may go unaddressed, or even unacknowledged. This way of thinking about reflection is important because it offers an emancipatory framework for audiologists to attend to ethical dilemmas and to advocate for systemic change and improvement.

1.2.3.1 Reflection-*in*-action versus reflection-*on*-action

Next, I discuss action in terms of daily professional practice. Schön (1983) states that our knowing is *in* our action. Eraut (1994) offers a critique of Schön's work,

suggesting that his theory is fraught with ambiguity and inconsistency. In Eraut's (1995) attempt to clarify Schön's message, he proposes a reframing of reflective practice around the aspect of action. Eraut (1995) claims that Schön's main contribution is to the theory of metacognition, or self awareness of cognitive processes. Eraut (1995) argues that although Schön emphasizes the notion of reflection-in-action, his examples actually focus exclusively on reflection on past actions.

In some respects, I disagree with Eraut's (1995) critique. Schön's (1983, 1987) description of reflection-in-action refers to the expert use of tacit knowledge that has been developed through experience. Schön's reflective practitioner may indeed reflect on practice after it has occurred, but the practitioner can also make use of experiences to guide practice as it unfolds, or *in-action*. As explained above, this involves the use of tacit knowledge, which when enacted in practice, is seen as knowing-in-action. An example Schön (1992) uses is that of a musician or athlete, who learns and improvises based on lessons that are learned and adapted quickly, online, during and within practice and play. Musicians and athletes also use reflection in a longer term process of learning or playing. For example, musicians may listen to an audio recording of their playing, and athletes may watch a video recording of a game or practice session. Thus, Schön does not restrict reflection to any one temporal domain. Reflection-in-action and -on-action are both necessary to good practice, and knowing-in-action often underlies our practices. Of the two temporal domains, reflection-in-action is perhaps more difficult to develop or make explicit. Yet, reflection-in-action offers a valuable theoretical insight to audiology because it highlights the importance of in-the-moment problem solving and learning that does not exclusively occur following significant temporal delay. Much literature on reflective practice emphasizes reflection-on-action, in the form of thinking back on practice or writing about practice. Yet, this view of reflective practice is narrow and incomplete. Reflection-on-action affords a change in future actions based on reflection upon past actions, and reflection-in-action offers the potential for

change, refinement, or optimization within actions as they unfold, while the action taking place can still be impacted, seamlessly within the moment.

1.2.3.2 Reflection-in-action in audiology

Reflection-in-action refers to reflective processes that occur in the midst of action without interruption; our thinking reshapes what we are doing as we are doing it (Schön, 1987). An example of reflection-in-action in audiology occurs when a proficient, experienced audiologist is performing Visual Reinforcement Audiometry (VRA) to assess infant hearing. This operant conditioning procedure requires the audiologist to present appropriate auditory test signals at various levels as required, present visual reinforcement when the infant performs a head-turn after hearing the auditory stimuli, center the infant's gaze back to midline, and record all correct head turns, lack of head turns, false positives, and control trials. This involves operating several pieces of equipment at once and must be done in a seamless fashion, because infants have such short attention spans and are relatively unpredictable in terms of how they will react and respond to the procedure. The audiologist must be able to assess if the infant is developmentally ready to perform the VRA tasks, and must efficiently and effectively monitor and make adjustments to her own performance, based on the infant's individual needs. I use the word performance here because it is both an art and a science to obtain accurate hearing thresholds from the infant, while also ensuring that the experience is enjoyable, rather than unsettling or traumatic. A negative experience in the sound booth may make it difficult to regain the infant's trust for undergoing future assessment and habilitation. Further, the audiologist must make "on the fly" decisions when the assessment is not going as planned, whether the infant i) will not condition to the task, ii) is frightened by the environment, stimuli, or reinforcement, or iii) simply feels irritable that day.

1.3 Summary: A reflective roadmap

The literature about reflection contains many different interpretations. I have attempted to summarize what I found to be the common threads pertinent to

audiology. Schön's work is considered seminal (Redmond, 2004), and serves as a good introduction to reflective practice. However, a reading of works by some of the theorists who inspired or were inspired by Schön, leads to a renewed, and potentially improved, appreciation for reflection and for interpretations of Schön's work. Schön's popularity is likely due in part to the eloquence and accessibility of the writing style (Eraut, 1995; Redmond, 2004). In addition, his popularity may be attributed to his critique of technical rationality as the primary source of knowledge for practitioners and his provision of an alternative or complementary conception – an epistemology of practice (Kinsella, 2007c, 2009). Schön's critique of technical rationality also coincided with a growing disillusionment with positivism (Eraut, 1995). Critiques aside, the highly resonant characteristics of Schön's reflective practice (see Kinsella, 2007c) have led to its popularity with practitioners and scholars interested in professional practice.

I do agree with Moon (2004) in identifying Dewey, Habermas, Kolb, and Schön as key theorists of reflection (presented above in chronological order of their work). Although many others have written extensively on reflection, these four cover reflection from its practical application in education (Dewey, 1910), role in learning (Kolb, 1984), role in professional practice (Schön, 1983, 1987), and purpose in emancipation (Habermas, 1971). I used these theorists as four starting points on my compass, which I then used to navigate the large body of literature. Any practitioner or professional education scholar interested in reflective practice could also benefit from at least an awareness of the work of this group of four. Although each of the four theorists discussed above hold unique perspectives with respect to reflection and reflective practice, together they provide a unified, broad foundation for reflective audiology practice.

1.4 Reflection in audiology

“...the predominant concern of educational practice has become an instrumental preoccupation with *techniques*, *control*, and with means-ends criteria of *efficiency* and *effectiveness*...the shortcomings of these modes lie in their preoccupation with the measurement of learning outcomes, the quantification of achievement,

and the management of educational objectives” (Van Manen, 1977, p. 209). Indeed, this quote from Van Manen resonates with my experiences and learning throughout my own education and practice. Learning is an interactive, continuous process that can be negatively impacted by attempting to break it into measureable units (Dewey, 1938; Kolb, 1984).

In the current climate of professional practice in audiology, Schön's (1983) dilemma of rigor or relevance presents itself. Should practitioners and researchers stay on the high, hard ground of professional practice, where technical knowledge can be employed to solve problems, or should they acknowledge and descend to the swampy lowland of practice, where professional artistry is required to navigate complex and important problems (Schön, 1983)? Schön (1987) suggests that we experience the rigor or relevance dilemma when we realize the limitations of scientific research-derived propositions in practice. This notion describes my experience, entering practice as a student believing in EBP, touting its benefits, only to be confronted with the indeterminate zones of practice (Schön, 1983) and the realization that the main source of evidence I knew was often insufficient to guide my professional practice. Upon a return to academia to tackle some of the critical problems I had experienced in practice, again I was surprised to find that my repertoire of quantitative research skills seemed to leave me ill-equipped to reach my goals of researching and improving audiology education and practice. The problems I wished to explore were located in the swampy lowland, where a new way of thinking about knowledge, and a new set of skills, would be required.

According to Moon (1999), a goal of reflective practice is to improve the care of clients and yet this goal is often neglected in the reflective practice literature. Flaming (2001) explores the Aristotelian concept of *phronesis*. For Flaming (2001), *phronesis* holds as its goal the *eudaimonia* (genuine happiness and human flourishing) of the patient/client, “whatever that means for the individual patient/client” (p. 255). According to Flaming (2001) *phronesis* is deliberation about values with reference to *praxis* (the union of theory and practice (Kinsella,

2001)). Phronesis is pragmatic, variable, and context-dependent, oriented toward action and based on practical value-rationality. Phronesis is related to ethics, but is not analogous to ethics (Flyvbjerg, 2001). Phronesis provides a complementary conception to scientific research-based practice. A practitioner striving for eudaimonia of the patient/client would use phronesis, deliberating about ethically correct action, in particular situations (Flaming, 2001). The goals of phronesis certainly echo those of reflective practice: "Reflective practitioners...examine their definitions of knowledge, seek to develop broad and multifaceted types of knowledge, and recognize that their knowledge is never complete.... They reflect on themselves, including their assumptions and their theories of practice....reflective practitioners recognize and seek to act from a place of praxis, a balanced coming together of action and reflection" (Kinsella, 2001, p. 198). Given the current climate of audiology, reflective practice and other theories that may serve the goal of patient (and professional) eudaimonia may be especially timely.

1.4.1 A brief reflection – Audiology's swampy lowland

I have chosen to focus on reflective practice in audiology in particular because of my professional background and experiences, and the paucity of scholarly exploration of reflection in the field. Much of audiology practice occurs in Schön's (1987) metaphorical swamp; reflection may be useful to navigate this swamp. Audiologists experience ethical and systemic challenges and encounter sensitive practice situations on a regular basis. Examples are provided next.

1.4.1.1 Critical reflection in audiology practice

A very common ethical challenge in the current audiology climate is hearing instrument dispensing. In fact, this issue was raised by participants in a recent focus group to adapt a professional behaviours log (Bartlett, Lucy, & Bisbee, 2006) for use in audiology (Ng, Bartlett, & Lucy, 2008; Ng, et al., Accepted Jan 17, 2011). Here, Habermas' (1971) discussions about reflection may play an important role in allowing audiologists the freedom to reflect on the systems in

which they work, and to find ways toward emancipation from the unsettling discourses and structures to which they feel bound.

In private practice dispensing clinics, audiologists assess hearing sensitivity, determine if hearing aids may be of benefit, and if so, prescribe, potentially dispense, and fit these hearing aids for the client. Audiologists may also enjoy financial gain from the dispensing of hearing aids. Moreover, manufacturers of hearing instruments may provide incentives to audiologists for the sale of a particular type of hearing aid. As a clinical audiologist, I encountered the dilemma of putting the client first in the face of financial incentives for hearing aid sales. My employer provided “bonuses” to employees, which varied by the make and model of hearing aids sold. This incentive program was mandatory, and while many of my colleagues were able to practice with integrity in this setting, I personally struggled to reconcile the “fit” of my actual practice arrangement within my espoused theory of patient/client-centered practice. Unable to resolve the tensions I was feeling, I eventually left this position and returned to graduate school to study Health Professional Education. I continue to practice as an educational audiologist in a publicly-funded system, and I continue to find myself immersed in “swampy” practice situations, but I now have a language and theory with which to discuss and mediate these challenges.

In terms of sensitive practice areas, an audiologist is often the first professional to inform a family that their infant cannot hear, or to tell adults that they have lost some of their hearing and may benefit from amplification and aural rehabilitation. At times, audiologists may unintentionally present a one-sided view to families of young children with profound hearing loss or deafness, biased in favour of an aural/oral approach to language (using hearing aids or cochlear implantation and spoken language) over a sign-language approach. This bias is an inherent trait in most audiologists, given the profession’s focus on (re)habilitation through maximized use of residual hearing. Although both of the above examples of counselling by an audiologist are filled with good intention, informed by research evidence, and are often the best path for that client/family, a reflective

practitioner might remember that there are often exceptions to the rule. Reflective practice may help audiologists realize the assumptions they hold about what is “best” and thus improve their practice in the indeterminate zones. In other words, reflective practice may help amplify the often missing voices in some sensitive practice situations.

Audiology has been slow to outwardly and deeply adopt reflective practice. I speculate that reasons for this may include: a lack of exposure to reflective practice within audiology; biomedical perspectives in audiology education programs; a predominant value for EBP focusing on a narrow definition of evidence, and a relative lack of understanding and application of qualitative research methodologies (appropriate for studying reflective practice) in audiology. I believe that the best chance toward overcoming these potential barriers may be a non-dichotomous conception of professional knowledge that includes reflective practice, as explained by Kinsella (2007c). We must not abandon EBP, technical solutions, or quantitative research methods. These aspects of the field are fundamental and indispensable. However, reflective practice does require openness to a complementary way of thinking about knowledge, and perhaps an adjustment in our value system. A move toward evidence-informed (Epstien, 2009) reflective practice, a balanced epistemology of practice, may be in order.

1.4.2 Where are we now? Audiology’s journey into reflection

I have reflected on why audiology may be slow to adopt reflective practice, as well as my rationale for attempting to change this resistance to appreciation. Next, I will summarize the early steps that audiology has taken toward a welcoming space for discussion and study of reflection.

Articles relating to professional issues and education are just beginning to emerge in the audiology literature. At the time of conducting the literature review and planning study design, six relevant peer-reviewed articles were found, which addressed: 1) knowledge and behaviours that a health professional in human

communication sciences and disorders should possess (Sutherland Cornett, 2006); 2) professional identity of Master's versus Doctoral degree audiology students (Doyle & Freeman, 2002); 3) prediction of factors that influence professional identity in health and social care students (Adams & Sturgis, 2006); 4) implementation of a service-learning approach, including guided reflection for speech-language pathology (SLP) and audiology students (Goldberg, McCormick Richburg, & Wood, 2006); 5) use of journal writing in the assessment of SLP and audiology students' learning about diversity (Chabon & Lee-Wilkerson, 2006); and 6) an action research approach at interdisciplinary learning, involving reflection (Munoz & Jeris, 2005).

1.4.2.1 A brief profile of audiology students

A primary concern that arises from reviewing the articles listed above is that of the professional identity of audiology students. Doyle and Freeman (2002) found that audiology students had low expectations for potential future employment, income, and autonomy for the profession; low satisfaction and some doubt in their choice to become audiologists; and perceptions of poor public opinion and relative lack of educational challenge within the profession. Differences were found between Master's and Doctoral students. In the United States, a clinical doctorate "Doctor of Audiology" (AuD) has become the minimum degree requirement for entry to practice. Audiology doctoral students, more often than Master's students indicated that audiology would provide their family with a primary source of income, that they wished to be employers rather than employees, and had greater hope for employment, income, and autonomy for audiologists.

These results seem to align with the work of Adams and Sturgis (2006), who studied a range of health and social care students. Audiologists ranked second-last among 10 professional groups on a measure of professional identity, which asked questions such as "I feel like a member of this profession," "I am pleased to belong to this profession," and "Being a member of this profession is important to me."

These two papers illustrate that in the minimal body of literature discussing professional issues in audiology, audiology students present a demonstrated need for an examination of the often unspoken components of practice, such as professional identity. Reflection may be useful in attempting to explain and improve the relatively weak professional identity of audiologists (Adams & Sturgis, 2006; Doyle & Freeman, 2002), with potential for empowerment of audiologists to be autonomous professionals (Moon, 1999).

1.4.2.2 Early attempts at reflective audiology

Emerging efforts to use reflection in audiology will now be discussed briefly. Three studies involving audiology and / or speech-language pathology students have used reflection as part of a pedagogical approach. In one of these studies (Goldberg, et al., 2006), researchers evaluated the service learning approach. The service learning approach was described as an experiential, reflective problem-based learning approach, placing students with a community partner as part of an academic course requirement (Goldberg, et al., 2006). One group of students completed a placement in an educational audiology setting (the other two groups were speech-language pathology placements). Students kept reflective journals as a part of this study, but these were not described in detail. Authors described the service-learning approach as a method that could help students see value in and need for ongoing reflection, documentation of EBP and, community roles (Goldberg, et al., 2006).

In another pedagogical study, reflective journal writing was used to assess communication sciences and disorders students' learning about diversity, from beginning to end of a diversity course (Chabon & Lee-Wilkerson, 2006). Journals were evaluated and ranked as Descriptive, Empathic, Analytic, Metacognitive (Level 1 through 4, respectively). Level 4 would be considered the deepest and most challenging form of reflection. Most journal entries were ranked at the descriptive / Level 1 end of this scale, with just 9 entries ranked as Level 4, relative to 45 at Level 1. The authors concluded that reflection is important to learning about diversity, but could be more beneficial if guided or actively

fostered. Students did not improve in the depth of their reflections throughout the course, in which they were left alone to learn how to reflect. This finding supports the use of a guided approach to reflection, which has been cited by many as crucial to the success of the process (Bartlett, Lucy, Bisbee, & Conti-Becker, 2009; Johns, 1984, 2002; Moon, 1999). The authors also acknowledged that in formally evaluating the journals, students' writing may have been inhibited. Other authors also suggest that reflection is not only challenging to assess, but perhaps should not be assessed because it may influence the reflective experience itself (Stewart & Richardson, 2000; Sumsion & Fleet, 1996).

In the work of Munoz and Jeris (2005), students and faculty members reflected as one part of a multi-technique approach at addressing the broad question of how to provide an interdisciplinary team approach to service learning. In this instance, critical reflection papers were deemed an effective means of collecting data and also allowed participants to recognize diverse world views and value different perspectives. Further, participants learned that it was important to attempt to understand their own views and those of others on an ongoing basis (Munoz & Jeris, 2005). The study described above serves as an example of the use of reflection in research within the context of a participatory action project. In this methodology, reflection can serve as both a method for data collection as well as a tool for change and action.

These three attempts (Chabon & Lee-Wilkerson, 2006; Goldberg, et al., 2006; Munoz & Jeris, 2005) at incorporating reflection into audiology education demonstrate potential for the benefits of reflective practice, but perhaps more importantly, highlight a need for reflection to be studied further and in more depth within audiology. These studies also demonstrate a need for those guiding students in reflection to have an understanding of reflective practice. A capable mentor in the reflective process can facilitate meaningful and deep reflections in students who may otherwise complete superficial reflections, for the sake of satisfying course requirements. These results also suggest that clinical training environments and universities must be supportive of a reflective approach.

Finally, students may not be “ready” to reflect in a critical manner until they have gained some practice experience and maturity (Hatton & Smith, 1995). However, exposure to reflective practice early on may better equip students to become reflective and critical practitioners in the future and facilitate movement from basic competency to proficiency or even expertise (Benner, 1984; King, et al., 2007).

1.4.3 Fostering reflection in audiology

Multiple approaches to engaging reflection exist, including reflecting upon critical incidents (Benner, 1984; Flanagan, 1953), keeping ongoing learning journals (Moon, 1999), and adopting a guided reflection approach, which involves a fusion of teaching and research in which the “teacher” leads the learner through specific questions, with the goal of a transformative learning experience through reflection (Johns, 2002). Approaches can also be combined. For example, one could enlist a guided and structured approach to written reflection on critical incidents (which could be any significant experiences or events of practice that stimulate reflection). The guidance in this case could come from a more experienced and advanced peer mentor, posing questions and probing for clarification and deeper thought. These reflections could be recorded as part of an ongoing practicum or practice journal.

Current scholars of reflection who are particularly committed to the goal of bringing reflective practice to the forefront of professional education include: Moon (1999, 2004), and Kinsella (2000, 2001, 2006a; 2006b; 2007a, b, c, 2009; Kinsella & Jenkins, 2007). These authors have been selected because they clearly articulate the theoretical bases of reflective practice in an accessible yet thorough and in-depth way, and they also offer a range of practical applications of reflective practice.

Kinsella (2000) developed a succinct guide to assist a practitioner in becoming reflective, entitled *Professional development and reflective practice: Strategies for learning through professional experience, A workbook for practitioners*. The

workbook is set up as a reflective approach to professional development. It explains in practical terms the concept of experiential learning, reflection on experience, anticipatory reflection, reflection-in-action, and various approaches to retrospective reflection such as uncovering assumptions, theories of practice (both espoused theories and theories in-use), case records, professional practice history and annual self-reviews. This workbook may be used by a practicing audiologist interested in improving practice, or by clinical instructors and students as part of clinical education.

A second resource of potential use for audiology students is Moon's (2004) *A Handbook of Reflective and Experiential Learning – Theory and Practice*. This handbook, directed at educators across disciplines, includes an introduction to reflective and experiential learning theory, with a practical compilation of 14 "resources" for reflective writing. Although writing is not necessary for reflective practice, it is certainly a useful way to explicitly reflect (Bolton, 2005). These resources include practical reflective writing examples and a graphical depiction of the reflective process. Copyright restrictions have been waived for the resource section of Moon's (2004) handbook, making the section easily distributable to students for use. A note of caution must be expressed, in that students do benefit from guidance from a faculty member, mentor or supervisor who is comfortable with and capable of reflection. In fact, Moon presents a two-step approach to introducing reflective activities to learners, in an effort to bring students to a place of meaningful reflective practice. The first step is to simply present reflection in a detailed discussion format, providing both good and poor examples of reflective writing. This step also involves giving students an opportunity to "practice" reflecting with feedback from a mentor. The second step is aimed at deepening reflective activities, and several strategies for this are outlined in the handbook. It is recommended that educators and mentors develop a solid understanding of reflective practice or are capable reflective practitioners before guiding students in this manner (Moon, 1999). The above resources were informative and useful in my work for the purposes of introducing reflective practice to audiology students.

1.4.4 Research needs in reflection and reflective practice

Research is needed to improve understanding of: what reflection offers, alters and enhances; the role of reflection-in-action; positive and negative effects; and how it may be taught and learned (Mann, Gordon, & Macleod, 2009). In Mann et al.'s (2009) systematic review of reflection and reflective practice in health professions education, several research questions were posed, based on the authors' identification of needs for empirical research. I derived my own exploratory, open-minded research question based on the vast unknowns about reflection and reflective practice within audiology at the inception of planning the dissertation research. Accordingly, the Mann et al. (Mann, et al., 2009) questions are discussed in Chapter 5.

1.5 Closing reflections

It may be that the slow adoption of reflective practice into the field and profession of audiology is due in part to the volumes of theory involved in deeply understanding and appreciating reflection as a professional education and development tool. Reading Schön (1983, 1987) was my introduction to reflective practice, and it inspired me to look further. However, I was able to do this because this is my research area. Many professors in audiology programs and many practicing audiologists, students, and clinical supervisors do not have this luxury. Fortunately, succinct summaries of reflective practice are now popular, providing enough theoretical background and practical examples to allow busy faculty members and clinicians to make use of the long history of reflection in learning, education, and practice without having to devote months to study. It is important to consider this theoretical background to avoid surface interpretation and application of reflection as a passing buzzword. Reflection and reflective practice, as described in this chapter, are deeply rooted in a long history of theory about knowledge and learning. Reflection is an inseparable part of learning from experience, and thus a vital component of practice and professional development.

“Reflective thinking...involves overcoming the inertia that inclines one to accept suggestions at face value; it involves willingness to endure a condition of mental unrest and disturbance...[it] means judgment suspended during further inquiry; and suspense is likely to be somewhat painful” (Dewey, 1910, p. 13). At the outset of this work I was in the space of unrest and disturbance described by Dewey (1910) and certainly returned to this space cyclically as the research and writing progressed. Although I do not believe I am new to reflective thought, I am new to the scholarly discourse of reflection and reflective practice and to qualitative research approaches. Audiology is also in the beginning stages of outwardly and intentionally adopting alternative approaches to thinking, research, and practice including systemic issues. I believe that a careful consideration of reflection and reflective practice will help audiology overcome the “inertia” that threatens to challenge our growth into a well-rounded healthcare profession and academic field.

1.6 The research question

A review of the theories of reflective practice shows that reflection is indeed considered important to the generation of knowledge, especially knowledge grounded in experience. Existing research on reflection in audiology is sparse, and focuses on using reflection as a teaching and learning tool, usually as part of a larger pedagogical or clinical approach. Books and articles have explored approaches to fostering and developing reflective practices in practitioners. Given the nature of reflection in learning and practice, it is assumed that most practitioners are using reflection to at least some extent. It is also presumed that fostering its enactment further would be beneficial to practitioners and their clients. Yet, there is an apparent gap in examining if and how reflection is enacted in audiology novices early on: if it occurs, if and how it is useful, and how it is used, learned, fostered, and developed. Thus, the current study addresses the research question “How is reflection enacted and implicated in audiology students’ development as professional practitioners?” Processes of reflection

were studied within the context of audiology students' development as professional practitioners.

The theoretical background explained in this chapter serves as the definition and framework through which reflection and reflective practice are understood in this body of work. The practical approaches to fostering reflection in audiology discussed above will inform the introduction to the discourses of reflection and reflective practice provided to participants, so that they are able to articulate their understandings and uses of these processes.

Chapter 2

2 Methodology: The methodological spiral of grounded theory

The purpose of this chapter is to provide a rationale for the use of a grounded theory methodology guided primarily by a constructivist lens, and also informed by pragmatist perspectives, to explore the question, “How is reflection enacted and implicated in audiology students’ development as professional practitioners?” Three major schools of grounded theory are commonly cited: Glaser’s emergent approach (Glaser & Strauss, 1967), Strauss and Corbin’s (1990, 1994, 1998) or Corbin and Strauss’ (2008) pragmatic approach, and Charmaz’s (2006) constructivist interpretation of grounded theory.

I begin with a working definition of grounded theory, and provide an overview of the various schools of grounded theory. I then describe some grounded theory methods. The school of grounded theory dictates the specifics of how methods are applied; differences in methods across schools are noted. This relationship between school of grounded theory and specific application of methods is explained as a *methodology-methods package* of grounded theory.

Throughout this chapter, I attempt to explicate the tensions and fit between each of the major schools and the philosophical and theoretical framework guiding my work. The journey was cyclical like the grounded theory development process itself, and the chapter is also cyclical as “Researchers, who first identify their ontological and epistemological position, are able to choose a point on the methodological spiral of grounded theory where they feel theoretically comfortable, which, in turn, will enable them to live out their beliefs in the process of inquiry” (Mills, Bonner, & Francis, 2006 p. 7-8). Thus, I aimed to use this writing experience as a means of determining the form of grounded theory that would best match my ontological and epistemological views, and best support my research question. Throughout this exploration, I tried to heed the warnings of

the expert grounded theorists, who worry that because grounded theory “runs the risk of becoming fashionable” (Strauss & Corbin, 1994, p. 277), it may be applied in a generic and misinformed manner (Strauss & Corbin, 1994).

In this chapter, “Glaserian” refers to the emergent school of grounded theory originated by Glaser and Strauss (1967) and primarily continued by Glaser (Glaser, 2002a, b, 2007; Glaser & Holton, 2004). The pragmatist school of grounded theory refers to Strauss and Corbin (1990, 1994, 1998) and Corbin and Strauss (2008), with my focus on the latter. Finally, Charmaz’s (2006) interpretation of grounded theory is primarily referred to in this document as a constructivist approach to grounded theory. The major schools of grounded theory must be explored and compared in order to situate myself on the “methodological spiral” (Mills, et al., 2006 p. 7-8).

2.1 Defining grounded theory

To begin this journey, theory and grounded theory need to be defined. One of the possible outcomes of attempting to generate grounded theory is to achieve description instead of grounded theory (Corbin & Strauss, 2008; Glaser & Holton, 2004; Glaser & Strauss, 1967). This is not necessarily a negative outcome, but can be undesirable if one is specifically attempting to discover or develop grounded theory. Generally speaking, theory has been defined as a unified, systematic causal explanation of a diverse range of phenomena, which can be evaluated in terms of parsimony, completeness, predictive power, and scope (Schwandt, 2007). However, the preceding definition of theory does not address the *grounded* aspect of grounded theory. Charmaz (2006) explains the *grounded* aspect of grounded theory as: “... taking comparisons from data and reaching up to construct abstraction and simultaneously reaching down to tie these abstractions to data” (p.181). Definitions of theory and grounded theory also differ based on one’s theoretical and epistemological position.

As such, Charmaz (2006) differentiates between positivist and interpretive definitions of grounded theory, stating that “positivist theory seeks causes, favors

deterministic explanations, and emphasizes generality and universality,” (p. 126) whereas “interpretive theory assumes emergent, multiple realities; indeterminacy; facts and values as linked; truth as provisional; and social life as processual” (p. 126). Strauss and Corbin (1998) pragmatically view grounded theory as “a set of well-developed concepts related through statements of relationship, which together constitute an integrated framework that can be used to explain or predict phenomena” (p. 15). In this comparison, I situate myself on the interpretive end of the continuum that ranges from positivist to interpretive theory. Yet, I find some pragmatist assumptions useful for my current research question. Pragmatism, for Corbin (Corbin & Strauss, 2008), is based on the following key assumptions: 1) truth can be known “for the time being” and yet it can be shown to be partly or wholly wrong at a later date; 2) knowledge can be accumulated and provides the basis for the evolution of thought and society, and 3) knowledge can be used for practice and practical affairs. Corbin (Corbin & Strauss, 2008) bases her pragmatist/interactionist assumptions on the theory of Blumer (1969), Dewey (1929) and Mead (1956), and her collaborator, Strauss (Corbin & Strauss, 2008).

In summary, the Glaserian view of theory leans toward the positivist definition, which assumes a universal truth exists and can be represented. The pragmatist and constructivist views of theory both acknowledge that truth is provisional. Pragmatist and constructivist theory differ from each other in that pragmatist theory has a more explicit goal to solve problems through explanation or prediction, and constructivists more readily recognize the importance of context and the impact of interpretation.

For my purposes, grounded theory is defined in the interpretive tradition and in agreement with the tenets of symbolic interactionism (explained in Section 2.5.3). Borrowing from Charmaz’s (2006) discussion of theory and from the pragmatist-interactionist perspective of Corbin (Corbin & Strauss, 2008), I have developed the following definition to serve as a touchstone as I strive to understand and develop grounded theory. *Grounded theory is an abstract conceptualization that helps us understand the studied phenomenon by demonstrating patterns,*

connections, and interactions. The act of theorizing is a subjective practice; thus, although a theory may prove to have explanatory or predictive power beyond its substantive topic area, it will also be inextricably tied to the world from which it was derived. That is, theory, even when grounded in data, is subject to interpretation and this is acknowledged from the outset of its construction, yet not viewed as preclusive of impact beyond the substantive area.

2.2 A rationale for grounded theory

I have chosen grounded theory over a strictly descriptive approach to address my research question for the following reasons. Although description can include conceptualization, theory tends to be more abstract and has greater potential for improving understanding or offering explanation. Further, grounded theory has the potential to reveal social processes (Charmaz, 2006; Corbin & Strauss, 2008; Glaser & Strauss, 1967) and is especially useful in areas that lack existing extensive study (Stern, 1980). Becoming a professional practitioner can certainly be considered a social process. Finally, theory helps us to begin to think about action and change and is directly linked to practice (Dewey, 1910, 1938; Kinsella, 2001; Polanyi, 1958).

2.2.1 Seeking understanding of interconnected processes through the process of developing grounded theory

My motivation for studying reflection in audiology students stems from a perceived need for improvement in audiology education and practice, a documented lack of professional identity among audiology students (Adams & Sturgis, 2006; Doyle & Freeman, 2002) and an apparent need for more theoretical work and research in the area of reflection, and reflective practice in general and in audiology (Chabon & Lee-Wilkerson, 2006; Goldberg, et al., 2006; Mann, et al., 2009; Munoz & Jeris, 2005). Development as practitioners, the act of reflection, and the enactment of reflective practice are all related processes. Reflection is “active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and further

conclusions to which it tends” (Dewey, 1910, p. 6). It consists of two sub-processes 1) a state of perplexity, hesitation, or doubt, and 2) investigation to support or disprove the suggested belief (Dewey, 1910). Reflective practice is a practical way of theorizing about the embodied (Kinsella, 2007b) and intentional, explicit forms of reflection in professional practice. Reflective practice can be viewed as a journey or process that one embarks on as a professional practitioner, through which one can continuously strive to improve practice (Kinsella, 2007a; Kinsella & Jenkins, 2007). Becoming a professional practitioner has been explored as a process of professional development or socialization (Bartlett, et al., 2009; Du Toit, 1995; Mooney, 2007; Richardson, Lindquist, Engardt, & Aitman, 2002; Teschendorf & Nemshick, 2001). Questions of process lend themselves to grounded theory, and development of a theory offers a potentially more practical link to program development or program- and system-wide change than description alone.

Description lacks much interpretation; rather, it focuses on conceptual ordering as classifying events and objects without relating them to each other, while theorizing is “the act of constructing an explanatory scheme from data that systematically integrates concepts, their properties, and dimensions, through statements of relationship” (Corbin & Strauss, 2008, p. 64). The discovery of process requires the researcher to go beyond description to carefully construct and relate categories and concepts and to abstract processes. Process is thus likely to lead to theory. Even from the earliest works on grounded theory, Glaser and Strauss (1967) emphasized that theorizing is a process, ever-developing and never perfect.

2.3 A brief timeline of grounded theory: Three schools

Glaser and Strauss (1967) introduced grounded theory to the field of sociology as a way to discover and develop new theory from data. Rather than generating theory by logical deduction from *a priori* assumptions, Glaser and Strauss (1967) stated that grounded theory is derived from data systematically obtained through social research. In some respects, grounded theory as a methodology or method

(this distinction is discussed in Section 2.4) paved the way for qualitative research. However, Glaser and Strauss (1967) did not initially discount quantitative methods and quantitative data in the development of grounded theory, despite grounded theory's current-day association with qualitative research.

Strauss and Corbin (1994) summarized the three goals of *The Discovery of Grounded Theory* (Glaser & Strauss, 1967) as follows: 1) to provide a rationale for theory grounded in data; 2) to provide guidance in the development of grounded theory and 3) to raise the status of qualitative methodologies as legitimate forms of research. Forty years later, grounded theory is the most commonly cited approach to research in the social sciences (Bryant & Charmaz, 2007b). Accompanying the growth of grounded theory research are divergent streams of grounded theory. Most notably, Glaser and Strauss began to differ on their preferred approaches to grounded theory, which perhaps demonstrates the importance and influence of one's underlying philosophical beliefs in guiding methodology. Glaser began his career with a quantitative background while Strauss was a sociologist with symbolic interactionist roots (Bryant & Charmaz, 2007a). Strauss began to collaborate with Corbin, a nurse who also had pragmatist and symbolic interactionist roots (Corbin & Strauss, 2008). This collaboration led to the production of numerous publications on grounded theory, which outlined in great detail the specific methods to be used in qualitative research (Strauss & Corbin, 1990, 1994, 1998). The partnership of Strauss and Corbin also solidified the grounded theory divide between Strauss and Glaser, with Glaser often criticizing new and divergent approaches to grounded theory (e.g. Glaser, 2002b; Glaser & Holton, 2004). For example, Glaser suggests that Strauss' approach "forces" data into *a priori* structures when it should allow concepts and theories to emerge from the data (Boychuk Duchscher & Morgan, 2004; Kelle, 2005).

The most recent version of Corbin and Strauss' major collaboration, *Basics of Qualitative Research, 3^d edition* (Corbin & Strauss, 2008) explicates the

theoretical and philosophical underpinnings of their approach to grounded theory and further differentiates their version of grounded theory from Glaserian grounded theory. Many of the updates to the 3rd edition represent Corbin's theoretical and philosophical positions (Corbin & Strauss, 2008). Corbin describes herself as a pragmatist and symbolic interactionist. However, she reveals constructivist leanings when she acknowledges that theorizing is an act of constructing explanations, and findings are the constructions and interpretations of the researcher (Corbin & Strauss, 2008; Mills, et al., 2006).

Charmaz (2006) moves grounded theory even further away from attempts at post-positivist notions of explanation and toward interpretation and understanding, in her constructivist approach to grounded theory, stemming from pragmatist roots. Charmaz (2006) more explicitly recognizes multiple realities dependent on personal perspectives, contexts and values, co-constructions of experiences and meaning by participants and researchers, and the importance of researchers' reflexivity in grappling with how they may be influencing the data. Corbin and Strauss' (2008) approach concedes researcher interpretation, yet still strives to minimize the researchers' influence and shaping of findings (Corbin & Strauss, 2008), thus not striving to work *with* the researcher's reflexive lens. More extreme is Glaser's view, in which he openly warns against any methods that may lead to "forcing" data based on pre-existing knowledge – including in-depth review of relevant literature prior to entering the field (Glaser & Holton, 2004).

The three main branches of grounded theory are similar in terms of the actual data collection and analysis methods used (for example constant comparison, coding, theoretical sampling, memoing). Yet, in examination of the guiding principles, the practical applications of methods, and the reflexivity and interpretation within analyses, the school of grounded theory used in a particular study should be apparent. The underlying theoretical and philosophical beliefs of the research inform the application of the grounded theory methods.

2.4 Grounded theory: Methodology or methods?

The grounded theory literature is inconsistent in its reference to grounded theory approaches as a methodology versus a package of methods. Methodology is defined as theory of how inquiry should proceed, involving analysis of principles and procedures (Schwandt, 2007). The original work of Glaser and Strauss (1967), as well as, the earlier works of Strauss and Corbin (as indicated in Corbin and Strauss, 2008), did not explicitly address the assumptions that guided their suggested principles and procedures. Schwandt (2007) provides the example of symbolic interactionism as a methodology, and symbolic interactionism and grounded theory have been proposed as a “theory-methods package” (Mills, Chapman, Bonner, & Francis, 2007). I have begun to view grounded theory as a methodology-methods package, with the methodology differing across major schools of grounded theory, and the methods sharing similarities (see Table 1).

For example, it is generally agreed upon that constant comparison, theoretical sampling and coding are used by all schools of grounded theory (Charmaz, 2006; Corbin & Strauss, 2008); yet, their exact application differs according to philosophical and theoretical perspectives.

Each school of grounded theory is underpinned by its own ontological (nature of reality), epistemological (way of knowing) and theoretical (paradigm of inquiry) beliefs. For example, Glaser seems to believe in one true reality, which can emerge from the data, and thus to discover that truth one strives to eliminate bias. He also recommends that grounded theorists strive to develop grand theory; that is, to be able to reach a point of generalization of their substantive findings (Glaser, 2007). This aligns with a realist ontological, objectivist epistemological, positivist/post-positivist theoretical perspective seeking generalisable findings. Corbin and Strauss (2008) appear to lean toward a relativist, subjectivist, interpretivist perspective, favouring a pragmatic, symbolic interactionist approach to their research. They do not believe in precise explanation of one true reality, but attempt to best represent the truth of the data without imposing personal influence on the data and analysis (Corbin & Strauss,

2008). Charmaz (2006) considers herself to be rooted in the same perspectives as Corbin and Strauss, with the additional goal of recognizing and respecting that individual constructions of reality, and participant-researcher interactions cannot (and should not) be eliminated from data and its interpretations.

Table 1: Grounded theory methodology-methods package

| Method | Glaser's Glaserian Grounded Theory | Corbin and Strauss' Pragmatist Grounded Theory | Charmaz's Constructivist Grounded Theory |
|---|---|---|---|
| Theoretical sensitivity – what researcher brings to the research – knowledge, beliefs, pre-understandings, skill; and that to which researcher attends when gathering and analyzing the data. | Researcher knowledge and skill is important to a good grounded theory. But, because grounded theories emerge from the data, bias is eliminated. Literature reviews should be minimized. | Literature and professional experience help guide data collection and analysis, but researcher bias should be minimized. | Researcher should be explicit about her involvement in the research process, explaining her interaction with the research. This is thus tied inextricably to reflexivity. |
| Reflexivity – reflective thinking directed at the research process, and on researcher herself in the midst of the research process. | No need for reflexivity – researcher seeks to accurately represent what is occurring. Process of constant comparison precludes need for reflexivity, by eliminating bias. | A central component to grounded theory. Researchers may unconsciously affect their participants. Reflexivity may help researcher see how she is influencing things, and thus may help in minimizing this influence. | Inherent in interpretive grounded theory. Researcher's scrutiny of his or her research experience, decisions, and interpretations in ways that bring researcher into process and allow reader to assess how and to what extent researcher's interests, positions, and assumptions influenced inquiry. Reflexive stance informs how researcher conducts his or her research, relates to the research participants, and represents them in written reports. |

| | | | |
|---|--|---|--|
| Theoretical sampling – seeking pertinent data to develop your emerging theory; to elaborate and refine categories constituting your theory. | Selection of multiple comparison groups; primarily concerned with theoretical purpose and relevance in sampling for comparison groups. Groups provide conceptual control and maximize and minimize similarities and differences in data between groups, which facilitates emergence of clear categories. | Sampling that is responsive to the data, rather than pre-established before data collection; flexible and open; concepts derived during data analysis. Sampling concepts, not participants. | Researcher aims to develop properties of his or her developing categories or theory. This does not mean to sample randomly selected populations or to sample representative distributions of a particular population when engaging in this. Researcher seeks people, events, or information to illuminate and define the boundaries and relevance of the categories because the purpose of theoretical sampling is to sample to develop the theoretical categories. This can take the researcher across substantive areas. |
| Theoretical saturation – point in the research process that is reached when there is no need to theoretically sample any further. | Occurs when: 1) no new or relevant data emerges regarding a category; 2) development of the category's properties and dimensions can withstand variations of context in the phenomenon; 3) the relationships among categories are well established. | The point in analysis when all categories are well developed in terms of properties, dimensions, and variations. Further data gathering and analysis add little new to the conceptualization, though variations can always be discovered. | Gathering fresh data neither sparks new theoretical insights, nor reveals new properties of core theoretical categories. Must be careful about claims of theoretical saturation, depending on scope of the research question. |

2.5 My position on the methodological spiral

Grounded theory methods can be applied in a variety of ways dependent on methodology. The application of the methods should align with the overarching methodology, which includes ontological and epistemological positions. My own philosophical perspectives are in development as a new qualitative researcher. I consider myself to be theoretically in flux between post-positivism stemming from

personal beliefs and my pre-doctoral education in psychology and audiology, and interpretivism (Crotty, 1998) stemming from my professional practice experiences and doctoral studies. I also have critical tendencies inspired by practice experiences, which inspire my work.

I could not approach this work from an objectivist, post-positive perspective, given the topic of reflection with a constructivist influence (Kinsella, 2006a). Glaser (2002b) has stated that there is no need for a researcher to practice reflexivity (related to but distinct from reflection, relating to research – see Section 2.6.2) because the constant comparative method, or continuous interplay between data collection and analysis, ensures that the researcher's influence (bias and interpretation) on the data is nearly eliminated. In contrast to Glaser's views, other grounded theorists rely heavily on reflexivity to aid in their research (Charmaz, 2006; Muck & Mey, 2007). Given the centrality of reflection to my research question, a Glaserian approach is inappropriate. So, if I take the view that grounded theory methodology refers to the "school" of grounded theory, I have chosen to subscribe to the school of constructivist grounded theory for my methodology, applying grounded theory methods according to the guidance of this school of inquiry.

A constructivist approach to grounded theory brings the researcher's centrality to the forefront of methodology (Mills, et al., 2006). Specifically, it involves: 1) a reciprocal relationship between participant and researcher, who construct meaning with the researcher ultimately developing a theory grounded in the experiences of both; 2) establishment of a balanced relationship between researcher and participant, with explicit attempts to mediate inherent power imbalances; 3) clear positioning of author's role in the text, and the influence of literature review and how participants' stories grew into theory through the writing process (Mills, et al., 2006).

2.5.1 The philosophical fit of grounded theory to my research question and goals

My research question is “How is reflection enacted and implicated in audiology students’ development as professional practitioners?” Development into a professional and development into a reflective practitioner are both processes, as discussed in Section 2.2.1. Grounded theory offers appropriate methods to systematically and deeply understand the social process(es) of becoming an audiologist, and how reflection is used (if at all) in this process.

Grounded theory is sometimes positioned between positivism and interpretivism (Charmaz, 2004). Thus, I see it as a bridge between the often divided worlds of quantitative and qualitative research. Grounded theory can be used from any paradigmatic position; it can be systematic and empirical, or can involve interpretation and construction of meaning (Charmaz, 2004). Beyond a researcher’s personal fit in terms of ontology and epistemology, it can also be important for the intended “audience” of the research to feel a philosophical fit with the research. Grounded theory may thus be the optimal way to reach the academic field of audiology, in which qualitative inquiry struggles to receive the value and respect that quantitative research has achieved. A focus on EBP with a hierarchical view of evidence that prioritizes well controlled quantitative research studies is a predominant goal for clinical practice and research in audiology (Cox, 2005; Moodie, et al., 2008; Palmer, 2006). Other elements of EBP such as clinical expertise and client preferences have been mentioned (Gravel, 2004); however, these elements could stand to be discussed with greater emphasis and detail, relative to lengthier discussions relating to the evaluation of research evidence.

I am attempting to understand how audiology students use reflection as they move from status as a student clinician to an audiologist. Corbin and Strauss (2008) defined process as: “ongoing action/interaction/emotion taken in response to situations, or problems, often with the purpose of reaching a goal or handling a problem ... the actions/interactions/emotions occur over time ... and have a

sense of purpose and continuity” (p. 96). According to Corbin and Strauss (2008), process is found in data as sequences of action/interaction/emotion in response to circumstances, events, or situations. Attempting to analyze data for process can lead to the discovery of patterns and ultimately lead to theory (Corbin & Strauss, 2008).

Charmaz also speaks of process, but in an implicit rather than explicit sense (2006). Constructivist grounded theory encourages researchers to delve into tacit meanings and processes, while not abandoning overt processes. Relationships do not need to be explicitly stated, but can be implied or connected through analysis. Of course, this means that the researcher’s view of the data is a key component of the coding and development of categories. However, in constructivist grounded theory, this is not to be avoided, but rather acknowledged and conducted with attention to reflexivity (Charmaz, 2006).

In summary, grounded theory is appropriate for my work for the following reasons. First, my research question is one of multiple processes (How is reflection enacted and implicated in audiology students’ development as professional practitioners?), and grounded theory is suited to studying processes (Charmaz, 2006; Corbin & Strauss, 2008). Second, pragmatically speaking, audiology is a profession that embraces quantitative research, and grounded theory can be seen as a bridge from quantitative to qualitative research (Charmaz, 2004). Finally, the research question is the first of its kind in audiology, and grounded theory is especially useful in areas that lack existing extensive study (Stern, 1980).

In selecting a school of grounded theory to guide my first attempt at developing grounded theory, I aimed to identify and align my epistemology, theoretical perspective, with my methodology and methods, as suggested by Crotty (1998). Further, I aimed to have a methodological approach suited to the research question that I sought to answer and to have the potential to impact change through my findings. The following quotation captures my own quest in sorting

through the somewhat conflicting perspectives of grounded theory. “I was looking for a way simultaneously to incorporate formal and informal understandings of the world. I sought a methodological place that was faithful to human experience, and that would help me sift through the chaos of meanings and produce the eureka of new, powerful explanations” (Star, 2007, p. 77). For my purposes, this faithfulness to human experience is one that respects the individual’s context, aligning the theoretical influences of Schön with my research approach.

2.5.2 Context

For my work relating to reflection and reflective practice in audiology students, I align myself with Schön’s constructivist leanings (Kinsella, 2006a). Thus, my epistemological perspectives neither align with that of the original work of Glaser & Strauss (1967), nor the ongoing work of Glaser (Glaser, 2002a, b, 2007; Glaser & Holton, 2004). Glaser strongly believes in emergence of codes and categories, rather than “forcing” categories onto data. Glaser also suggests that thorough knowledge of related literature can lead to this forcing or imposing pre-existing knowledge and theory onto the emergent data. Glaser views grounded theory as very distinct from what he terms Qualitative Data Analysis (QDA), in that the main goal of QDA is description, whereas grounded theory is abstract of time, place, and people (Glaser & Holton, 2004). Glaser categorizes constructivist grounded theory as QDA, and not true grounded theory (Glaser & Holton, 2004). Glaser views mixing of QDA with grounded theory as dangerous because it results in downgrading of grounded theory from its goal of integrated conceptual hypotheses, inductively derived from data (Glaser & Holton, 2004). This downgrade is due to a QDA focus on description that can take away from the abstraction of grounded theory (Glaser & Holton, 2004).

In contrast, Charmaz (2006) views the acknowledgement of context as one of the strengths of grounded theory and Corbin and Strauss (2008) contend that a researcher could stop before the development of theory and leave the study as a descriptive study. There are similarities between Corbin (Corbin & Strauss, 2008) and Charmaz (2006). Corbin is clearly a pragmatist, informed by an interactionist

perspective (Corbin & Strauss, 2008), while it appears that Charmaz is a constructivist informed by an interactionist perspective (Charmaz, 2006). Corbin reveals constructivist thought while Charmaz reveals some pragmatist/interactionist thought (Charmaz, 2006; Corbin & Strauss, 2008). I do not align myself with the somewhat prescriptive and rigid approach of Corbin and Strauss, which could be interpreted as misaligned with some of Corbin's stated worldviews (Corbin & Strauss, 2008) and the constructivist influences of Schön. Constructivism, pragmatism, and symbolic interactionism will now be explained within the context of grounded theory.

2.5.3 Philosophies and theories in grounded theory

Pragmatism is an American philosophical position that is inherent in grounded theory, likely due to Strauss' sociological background in the Chicago School tradition (Gerhardt, 2000). Its role in grounded theory is significant in that grounded theory came to fruition in a time of paradigmatic shift, just after the publication of Kuhn's *The Structure of Scientific Revolutions* (1962), which changed conventions about science and research (Bryant & Charmaz, 2007a). This movement likely motivated and facilitated the acceptance and popularity of the grounded theory methods proposed by Glaser and Strauss (1967). Often, pragmatists aim to overcome theory-practice divides (Dewey, 1974; Lewis, 1976; Schwandt, 2007). Grounded theory can be viewed as bridging theory and practice; it has been posited that the process of theorizing is itself a practice (Charmaz, 2006).

Symbolic interactionism is based on three basic premises: 1) meanings about things (e.g. people, institutions, situations) determine actions toward these things; 2) such meaning is derived from social interaction; and 3) an interpretive process is used to direct and modify the meanings as the situation is dealt with by a person (Blumer, 1969). Although Corbin (Corbin and Strauss, 2008) cites symbolic interactionism as part of her theoretical roots, with Strauss she took the interactionist perspective further by considering macrosocial aspects in constant

comparison, which are not typically considered from an interactionist perspective alone (Strauss & Corbin, 1990, 1994).

Charmaz describes her epistemological and theoretical views as constructionist (See Glossary), interpretive and constructivist, with some pragmatist roots (Bryant & Charmaz, 2007a; Charmaz, 2004, 2006). This fluctuation in views could reflect an evolution of sorts, but more likely reflects the potential for one's worldview or lens to shift depending on context, and the fuzzy borders, or overlap between various theoretical positions.

Glaser disputes that minimal, if any, data in grounded theory is constructivist. Rather, he argues that the constant comparative method minimizes the researcher's influence by exposing it and allowing more data to be collected in order to essentially eliminate bias (Glaser, 2002b, 2007). Constructivist grounded theory methodology calls on researchers and participants to work together to construct meaning and generate theory. In this research, I was guided by Charmaz's (2006) constructivist grounded theory, acknowledging the pragmatist roots of the methodology. This approach fits nicely with Schön's (1983, 1987) constructivism, as his theory was also strongly influenced by Dewey's (1910, 1929, 1938) pragmatism. In keeping with this theory-practice, methodology-methods relationship, I will now explain how the various schools (or methodologies) of grounded theory translate into application of grounded theory methods. It should be noted that many of the methods to be discussed below are iterative, interwoven, and non-linear in actual practice, but I attempt to discuss them individually and sequentially as much as possible, for explanatory purposes.

2.6 The grounded theory methods: Methodology-methods package

As stated earlier, the chosen school of grounded theory dictates how the various grounded theory methods are interpreted. The following section briefly summarizes key grounded theory methods: theoretical sensitivity, reflexivity,

literature review, theoretical sampling, theoretical saturation, and constant comparative method. For each method, the perspective of each of the three schools of grounded theory discussed in this paper is explained in relation to the given method. The order of discussion for each method is: Glaserian, pragmatist, constructivist (Glaser, Corbin and Strauss, Charmaz) drawing from the leaders of the three schools and other grounded theorists' commentaries on the schools' approaches. At times, similarities between schools preclude a completely independent discussion of their positions on the methods, and an integrated discussion of the method is presented.

2.6.1 **Theoretical sensitivity**

Theoretical sensitivity refers to what a researcher brings to the research, and therefore, that to which s/he attends. Depending on the epistemological position of the school of grounded theory being used, sources of theoretical sensitivity may differ. Glaser (2004) is opposed to conducting a thorough review of literature prior to commencing grounded theory work, although he does acknowledge the researcher's knowledge, understanding and skills as an integral part of the research process. However, the researcher's biases would not become a part of the data and resultant theory, because further sampling would help eliminate the researcher's bias as the theory emerges. Strauss and Corbin (1990) allow for literature (reading, research, and documents) and professional experience (if the researcher has this) to help guide data collection and analysis. Constructivist grounded theory is based on assumptions that researchers' lenses and their relationship with participants will affect the interpretation of data. Thus, theoretical sensitivity is essentially built in to a constructivist approach to grounded theory. Indeed, for constructivists, theoretical sensitivity can be developed and enacted in the process of theorizing, through reflexivity (Charmaz, 2006).

Neill (2006) suggests that reflexivity (defined below) can be useful in sorting through what the researcher brings to the research. This suggestion is consistent with a constructivist view that a researcher would be explicit about his or her

involvement in the research process, the interaction between researcher and research, and how each influenced the other (Charmaz, 2006). Strauss and Corbin (1990) contend that theoretical sensitivity allows researchers to develop grounded, conceptually dense and well-integrated theory through a dynamic and creative process. Theoretical sensitivity is intrinsically tied to another grounded theory tool – reflexivity. By engaging in reflexivity, theoretical sensitivity can be an evolving construct, with its context and influence fully realized through the process (Orland-Barak, 2002).

2.6.2 Reflexivity

Reflexivity has been defined as “...reflective activity within qualitative research. Reflective thinking ... occur[s] on two levels: on process, what might be viewed as the ‘effective component’ and on self awareness, the ‘affective component’” (Neill, 2006). Glaser’s school of grounded theory suggests that because data are emergent, and because the researcher seeks to accurately represent what is occurring, reflexivity is unnecessary (Neill, 2006). Essentially, for Glaser, the constant comparative method makes reflexivity unnecessary. The purpose of constant comparative method for Glaser is to eliminate bias and to get to the “true” codes and categories by sampling more and more people or groups until these become clear (Glaser, 2002b; Glaser & Holton, 2004). Glaser concedes that the researcher will influence data collection and analysis, but reasons that the bias is eliminated through constant comparison. Sampling continues to ensure that sufficient similarities in data are seen, thus proving that “X” is indeed an actual true code, category, and eventually, theory.

Reflexivity is an inherent part of grounded theory for those coming from an interpretive tradition, and Charmaz (2006) and Corbin and Strauss (2008) include reflexivity as a central component of their visions of grounded theory. Given my research question with its focus on reflection, it is clear for me that reflexivity must be an integral part of grounded theory. Reflection is linked to reflexivity in that reflexivity involves reflective thinking about the research process.

2.6.3 Literature reviews

Across schools of grounded theory, debate exists over the issue of literature review – whether to do one, how extensive it should be, how a literature review might affect data collection and analysis. Glaser is of the view that literature reviews should be avoided, because they interfere with the inductive emergence of data (Glaser & Holton, 2004).

According to Corbin and Strauss (2008), the discipline, school and perspective of the researcher will determine how much literature is used in the grounded theory process. They emphasize that researchers need not complete a comprehensive literature review before beginning the research, and even warn against becoming so steeped in the literature that one may become constrained by it (Corbin & Strauss, 2008). For the pragmatist school of grounded theory, literature can be used as a source of comparison, to enhance theoretical sensitivity, to stimulate research questions, to aid in theoretical sampling, and finally to confirm findings or raise questions therein (Corbin & Strauss, 2008).

From a constructivist standpoint, literature reviews become a part of the researchers' theoretical sensitivity. That is, the researcher should interact with participants and will inevitably influence the data, without putting aside knowledge from what they have read or experienced in the literature. The researcher ultimately interprets and reports on the data; a literature review adds to the ability of the researcher to find meaning and see the tacit processes that are taking place within the data (Charmaz, 2006). Reflexivity can also be used here to record the processes through which the effect of the researcher becomes a part of the data (Neill, 2006). In this research, the pre-research literature review is revealed in Chapter 1 with additional literature review that occurred after data analysis shared in Chapter 5.

2.6.4 Theoretical sampling

This aspect of grounded theory has not changed in practice since the days of Glaser and Strauss, although the theoretical rationale may have evolved. Glaser

and Strauss (1967) saw theoretical sampling as a selection of multiple comparison groups. Glaser and Strauss (1967) were primarily concerned with theoretical purpose and relevance in sampling for comparison groups. The use of groups was thought to provide conceptual and population control, as well as to maximize and minimize similarities and differences in data between groups, which facilitated the emergence of clear categories (Glaser & Strauss, 1967). The use of groups in this early work of Glaser and Strauss lent itself well to an objectivist perspective and post-positivist slant toward paradigm of inquiry, which is how Glaserian grounded theory can be viewed (Annells, 1996). However, theoretical sampling does not need to involve groups, especially for pragmatist and constructivist schools of grounded theory. Because Glaser was concerned with controlling for bias and ensuring that the grounded theory emerged from the data, groups were more appropriate for his school of grounded theory.

Corbin and Strauss (2008) differentiate theoretical sampling from other forms of sampling in that it is responsive to the data rather than pre-established before data collection. In other words, theoretical sampling is flexible and open, with concepts derived during data analysis. Corbin and Strauss (2008) use the metaphor of a detective to explain theoretical sampling. The researcher is like a detective, following the leads of concepts, never certain where they will lead, but open to whatever is uncovered. Researchers look at the data and decide which places, persons and situations to probe further into in order to learn more about emerging concepts. It is important to note the key difference between theoretical sampling and the more commonly understood form of sampling, in that here the researcher is not sampling participants, but rather concepts. This is a circular process that continues until theoretical saturation is reached (Corbin & Strauss, 2008).

Charmaz defines theoretical sampling as “seeking pertinent data to develop your emerging theory. The main purpose of theoretical sampling is to elaborate and refine the categories constituting your theory. You conduct theoretical sampling by sampling to develop the properties of your category(ies) until no new

properties emerge” (Charmaz, 2006 p. 97). Thus, the constructivist view of theoretical sampling is quite similar to the pragmatist position and I was guided by both of these schools’ definitions of this method in my research.

2.6.5 Theoretical saturation

Theoretical saturation is reached when there is no need to theoretically sample any further (Glaser & Strauss, 1967). Although the underlying rationale for theoretical saturation may differ between grounded theorists, it is generally agreed that theoretical saturation is reached when there is no perceived need to obtain more data. In other words, saturation is reached when the data seem to offer little new of value toward the generation of theory. In a Glaserian grounded theory process, theoretical saturation occurs when: 1) no new or relevant data emerges regarding a category; 2) development of the category’s properties and dimensions can withstand variations of context in the phenomenon; 3) the relationships among categories are well established (Morse, 1995).

For pragmatists Corbin and Strauss (2008), theoretical saturation is the point in analysis when all categories are well developed in terms of properties, dimensions, and variations. Further data gathering and analysis add little new to the conceptualization, though variations can always be discovered.

For a constructivist grounded theorist, saturation is reached when gathering fresh data neither sparks new theoretical insights, nor reveals new properties of core theoretical categories (Charmaz, 2006). The ability to withstand variation across context is notably absent from this definition. Charmaz also cautions that claiming saturation in general may be misleading and at times, theoretical *sufficiency* is indeed what is achieved (Dey, 1999). Charmaz suggests that theoretical saturation, not merely categorical saturation should be attempted, but cautions that claims must be made in the appropriate context and with representative scope. For example, if one is making broad claims about human nature, theoretical saturation may be a more challenging quest than if one is conducting a very small and situated study (Charmaz, 2006). In essence,

constructivist grounded theorists must avoid over generalizing and overstating the reach of their findings in the absence of explaining the context of the theory.

2.6.6 Constant comparative method

Constant comparative method is the cornerstone of grounded theory (Hood, 2007). Despite the epistemological or ontological differences of the grounded theorist, constant comparative method is used in any true grounded theory study. Constant comparative method does not differ greatly between schools of grounded theory, likely because it is the overarching method that encompasses all of the preceding methods, tying them together. This method entails inductively analyzing data, followed by comparison of data to other data, data to existing categories, categories to categories and to concepts (Charmaz, 2006; Schwandt, 2007). Through this process, relationships between categories and concepts are described and the grounded theory emerges (for Glaserians) or is developed (for constructivists or pragmatists). New categories can emerge leading to theoretical sampling to try to expand or differentiate existing categories with purposeful sampling and data collection. Glaser (Glaser & Strauss, 1967) suggests that this process stops when no “fresh” information is being collected as a result of the process (theoretical saturation). This decision and the choices involved in theoretical sampling leading up to it are affected by one’s theoretical sensitivity, especially if one is enlisting a constructivist approach to grounded theory.

2.7 Synthesis and summary

To summarize, my work does not align with Glaser’s approach to theoretical sensitivity, reflexivity, and theoretical sampling. Glaser does not support the need for theoretical sensitivity in terms of literature review, and does not see the value in reflexivity. The explicit acknowledgement of the researcher’s role in the construction of grounded theory that is provided through constructivist grounded theory, fits my work more so than the pragmatist approach that attempts to minimize such influences, acknowledging that some researcher-bias may seep into the grounded theory. For my particular research question, I believe that

constructivist grounded theory is the most appropriate match. In the process of introducing students to reflection and reflective practice, reading their written reflections and providing feedback, and engaging in interviews with the students and with faculty/supervisors, my own theoretical sensitivity undoubtedly contributed to the construction of meaning and the eventual grounded theory. Further, the lens through which I analyzed data was constructed by my experiences occurring alongside the research process. This influence is exposed to a degree through the reflexivity shared throughout this document, especially in Chapters 1, 2, and 5.

I have now explained the type of theory I aimed to develop, explored three main schools of grounded theory and described key grounded theory methods as they relate to their underlying methodology. This journey has made it clear to me that for a novice researcher, the selection of a methodology, even if based on careful consideration of one's ontology, epistemology, and research question, is merely a starting point. Grounded theory methodology is complex and I suspect that a new researcher would be best served by allowing the approach to evolve with the body of research. Corbin (Corbin & Strauss, 2008; Strauss & Corbin, 1990, 1994, 1998) and Charmaz (2004, 2006) demonstrate the potential for even grounded theory "experts" to learn more about the methodology and its applications; their work demonstrates a shift in perspective as they grow as researchers and theorists.

Despite Glaser's critique of constructivist grounded theory (Glaser, 2002b) I have proposed to closely follow Charmaz (2006). Similar to Charmaz, I expected to also rely on the work of Corbin and Strauss (2008), and the pragmatist-interactionist perspectives and theories with which they align, to guide my methods. Charmaz provides a solid philosophical framework while Corbin and Strauss provide more detail on how a beginner can start out with grounded theory methods such as coding. The constructivist grounded theory approach was used to address the question: "How is reflection enacted and implicated in audiology students' development as professional practitioners?"

Reflective practice is informed by constructivism (Kinsella, 2006a). Schön demonstrates constructivist leanings, especially informed by constructivist philosopher Nelson Goodman (Kinsella, 2006a) with pragmatist influences from Dewey (Schön, 1992). Constructivist thought is central to Schön's work. Schön stated: "When practitioners respond to the indeterminate zones of practice by holding a reflective conversation with the materials of their situations, they remake a part of their practice world and thereby reveal the usually tacit processes of worldmaking that underlie all their practice" (Schön, 1987, p. 36). The processes of worldmaking that Schön speaks of refers to constructivist thinker Goodman's processes of worldmaking, which include composition and decomposition, weighting, ordering, deletion and supplementation, and deformation (Goodman, 1978). For professional practitioners, in Schön's view, Goodman's notion of worldmaking is applied as the problem setting and professional artistry used to understand dilemmas, and to ultimately and creatively come to a new understanding and creative way of navigating a problematic situation (Kinsella, 2006a; Schön, 1987).

To become a professional is a process. As students move from novice to professional practitioner, values, attitudes, and beliefs as well as a sense of belonging and commitment within and to the profession are gained (Du Toit, 1995; Vollmer & Mills, 1996). Currently, a strong professional identity is lacking in audiology students (Adams & Sturgis, 2006; Doyle & Freeman, 2002). Reflective practice is a popular theory in many professions, including education, nursing, occupational therapy and social work, but is not commonly discussed in audiology.

Grounded theory is particularly useful for studying uncharted territory and for gaining a fresh perspective on a situation (Stern, 1980). It is also suited for studying process (Charmaz, 2006; Corbin & Strauss, 2008; Glaser & Strauss, 1967). The process of developing into a professional, perhaps reflective, audiology practitioner is ideally suited for a constructivist grounded theory approach, due to philosophical fit and utility of the methodology at constructing

new theory. The newness of qualitative methodology and reflective practice discourse in the discipline of audiology lends itself to grounded theory, with the methodology's potential to bridge seemingly but not necessarily dichotomous worlds and to offer practical guidance (Kennedy & Lingard, 2006).

Writing has been described as "a method of inquiry, a way of finding out about yourself and your topic" (Richardson, 1994, p. 516). Indeed, I have used this writing opportunity as a method of discovery. Reflecting on this journey to discover grounded theory methodology, I believe that all forms of grounded theory, if undertaken in a careful and thoughtful manner, are informed by the three major schools. Glaser believes that all is data, and that we can accurately represent the truth through grounded theory (Glaser & Holton, 2004). The three schools are historically tied, and an understanding of all three is likely to improve the application of just one. Corbin and Strauss (2008) believe that researchers can do their best to interpret what is truly happening. Finally, Charmaz (2006) believes that we are a part of the research process, thoroughly immersed in the process and both influencing and interpreting the data we collect, analyze, and report. I agree most strongly with Charmaz but also learned from the reading of the others, and align myself with the following view of an experienced grounded theorist: "...everything I see, hear, smell, and feel about the target, as well as what I already know from my studies and my life experience, are data. I act as interpreter of the scene I observe, and as such I make it come to life for the reader. I grow it" (Noerager Stern, 2007, p. 115). Thus, a constructivist approach to grounded theory is necessary to accommodate this view. However, before embarking on a grounded theory study, the contents of this chapter served as an informed conjecture of where I would ultimately end up on the methodological spiral.

2.8 Starting assumptions for the research

As the researcher primarily responsible for collecting, interpreting, and analyzing data gathered from my interactions with participants, it is necessary to explain my starting assumptions. My assumptions, knowledge, and worldview formed a lens,

through which I interpreted data, thus influencing the constructed grounded theory. By engaging in reflexivity throughout the research journey and in sharing these reflexive findings in Chapter 5, I provide a window into how my worldview and assumptions may have influenced my interpretations and the grounded theory (Charmaz, 2006). I have described my worldview in this chapter and I will now discuss my starting assumptions as they relate to the current study.

To begin, throughout my doctoral studies, I was a part-time educational audiologist for a large, local public school board. I also have some practice experience in a variety of public and private clinical settings in Southern Ontario. As a practicing audiologist in the community, I have developed assumptions about clinical audiologists in our community, which in part are responsible for my return to graduate school. These assumptions include a perceived need for ongoing efforts to provide evidence-informed, ethical, reflective, relationship-centered care, and a need for improved inter-professional, inter-agency and inter-sector communication, collaboration and care. As this current research reached the writing stage, I began preparing for future research specifically related to healthcare practice with/in non-healthcare contexts and settings as a result of my ongoing practice experiences. These preparations influenced my knowledge and understandings about healthcare practices in the midst of completing the current research.

As a practicing educational audiologist, I was faced daily with poorly defined problems with no obvious solution – “grey areas” or indeterminate of practice. I feel that the strength of the audiology program from which I graduated has fostered my resourcefulness to seek out evidence to guide my practice, while I have more independently developed other important aspects of clinical practice (such as reflective practice skills). I believe the current audiology program could benefit from challenging students to think critically and critically reflect, from early on in their development as professionals. For example, I have always wanted what was “best” for my patient/clients, but prior to beginning practice and early in practice, I certainly held more assumptions about what “best” meant; my

worldview was quite narrow. I acknowledge that it is impossible for any education or training program to prepare practitioners completely for whatever may come their way. However, after six years of university education leading up to practice, my value system was heavily weighted on a side that was subtly dismissive of personal and tacit knowledge, and provided little guidance to be open, systematic and critical of non-technical-rational sources of knowledge.

I was previously a student of the same audiology school in which my participants were enrolled; I acknowledge that some courses and professors had changed since I graduated in 2006. As an alumnus, I have some pride and allegiance toward the program. However, I have also formed opinions over the past five years since being out of the program, on suggested areas for continued improvement in the clinical and research programs. I participated in efforts to revise the current curriculum including running focus groups to report student perspectives back to faculty members. I also took on teaching roles in the school, though not with my cohort of participants. These teaching experiences very much influenced my perceptions of mentorship, and student relationships with the “guides” in their education (supervisors, professors, instructors). Two very disparate teaching experiences particularly shaped my views on adult and professional education, and factors influencing cohort and class dynamics, instructor-student relationships, and the success of a learning experience. These experiences are discussed further in Chapter Five.

In terms of my participants’ abilities and desires to reflect deeply and meaningfully, I had my pre-conceived doubts. I remember the feeling of being an audiology student, trying to focus on memorizing information, trying to become competent at all clinical skills, and juggling other commitments in which students are involved (such as research projects, community service). I suspected that some students would not value the reflective writing pieces as highly as they might value or feel compelled to value a course examination. I also suspected that students would be at and progress through different levels in terms of their

reflective practice inclinations. Yet, I hoped that the experience would help students grow in these areas.

I conclude this section about my starting assumptions with one of my goals and predicted challenges for this work. As a result of feedback from colleagues about my work to date, I try to actively resist the tendency to assume that my research will not be respected in academic audiology arenas. I do not view my work to be a critique of or in misalignment with the current state of audiology curricula and research. Rather, I strive to present my work as complementary and developing. I have faced and begun to overcome some early challenges of acceptance of my work as scholarly, important, and rigorous in audiology circles. I strive to grow my knowledge and remain committed to conducting my work and sharing it with colleagues. As the current research progressed I also began to see its general implications, beyond audiology, more and more, in the broader health professional education realm.

Chapter 3

3 Study design and methods

To reiterate, my research question is “How is reflection enacted and implicated in audiology students’ development as professional practitioners?” A constructivist grounded theory approach was used to address this *beginning* research question. This approach was used to construct a substantive theory grounded in data obtained from participants and from my interpretations. Because grounded theory is data driven, the initial research question was simply a starting point and an element of theoretical sensitivity. As the research progressed, additional and more specific questions were developed and addressed, based on the relevant codes and themes that were developing in data analysis. These questions are discussed in Chapter 4.

Design and methods considerations including strategies for overcoming predicted and experienced challenges are described in this chapter. Qualitative design is flexible in some respects, with some grounded theory methods responding to the needs of the data as they arise (for example, theoretical sampling) (Charmaz, 2006). Thus, these considerations are discussed as elements of design, keeping in mind that at times, they occurred within the research process as opposed to in *a priori* planning.

The organization of this chapter is as follows. I begin with an overview of the design, outlining its longitudinal timelines. Next, participant details are shared followed by the three data collection strategies used. Detailed procedures are then outlined followed by ethical considerations and data management strategies. Analysis approach, design, and quality considerations close the chapter.

3.1 Design overview

Participants included volunteers from a cohort of audiology students at a Canadian university. These students were followed for a two-year period. Student participants completed written reflections with theoretical sampling guiding the selection of participants for follow-up interviews. Clinical faculty were also initially sampled and clinical supervisors subsequently theoretically sampled. This data collection approach was repeated three times throughout students' development and into their first two to four months of professional practice as audiologists. See Figure 1 for an overview and timeline of data collection, juxtaposed with the participants' stage in the audiology education program.

3.2 Ethics approval

I obtained ethics approval (# 15921E) from the university's Health Sciences Research Ethics Board (See Appendix A). A total of three ethics amendments were submitted and approved as a result of the developing needs of the study. Also included in Appendix A is the ethics approval notice (#15406E) for a separate, simultaneous study that involved collection of data that were theoretically sampled for the current study (discussed in Section 3.4).

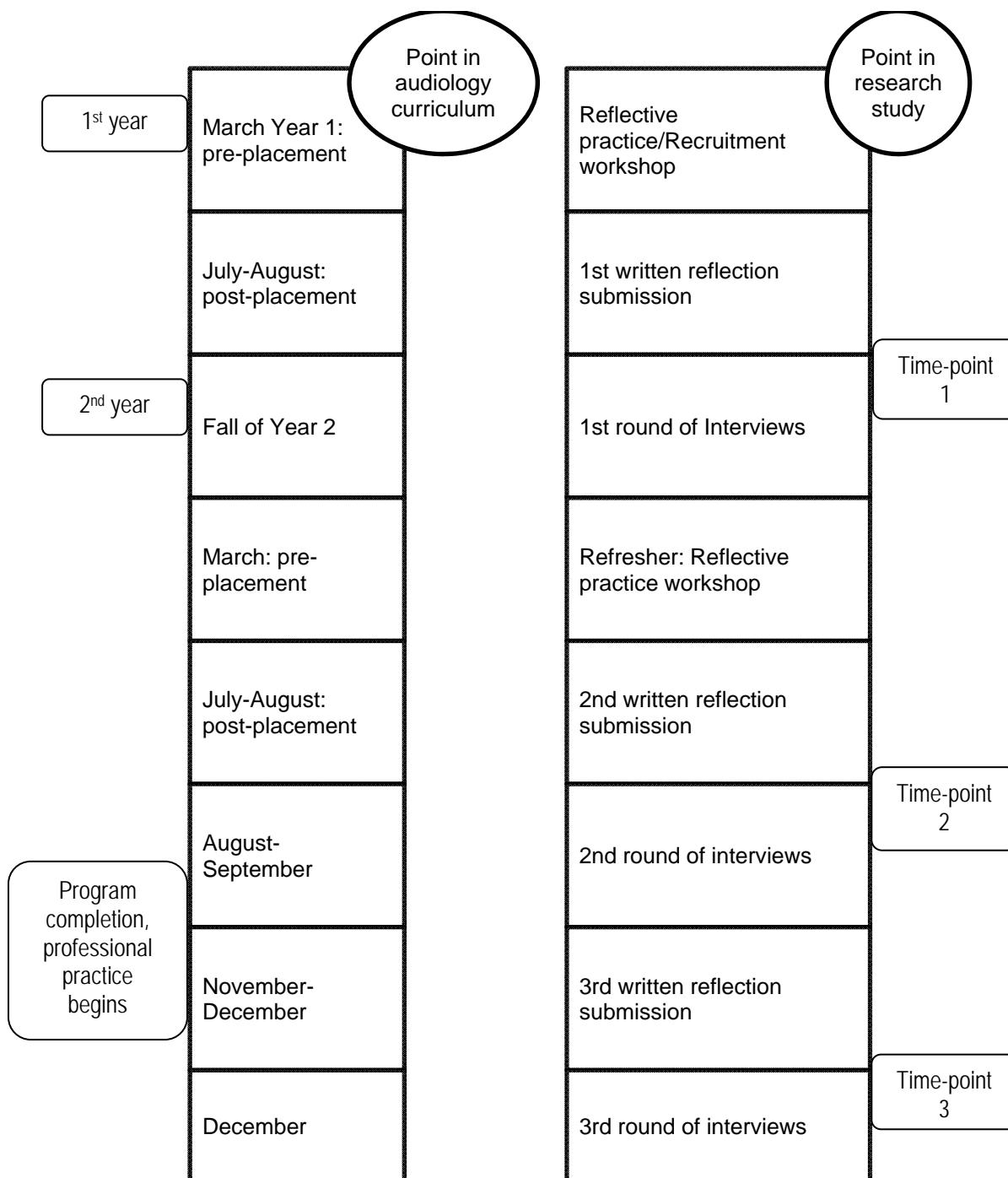


Figure 1: Overarching design timeline.

3.3 Participant details

3.3.1 Recruitment and sampling

3.3.1.1 Student participants

Recruitment of the initial sample of student participants took place as a multi-stage process, beginning with a dual-purpose workshop (Figure 1) to introduce the concepts of reflection and reflective practice and to recruit participants (see workshop documents in Appendix B). This workshop concluded by obtaining consent for participation from willing participants (see letter of information and consent form in Appendix C). Initial sample recruitment was complete with student participants' submission of the first written reflection (Figure 1, Time-point 1). This three-stage process and the numbers of students recruited out of the participant pool at each stage are outlined in Figure 2. Note that at Time-point 3 (refer to Figure 1), students had completed their audiology education program and had begun practice as new practitioners.

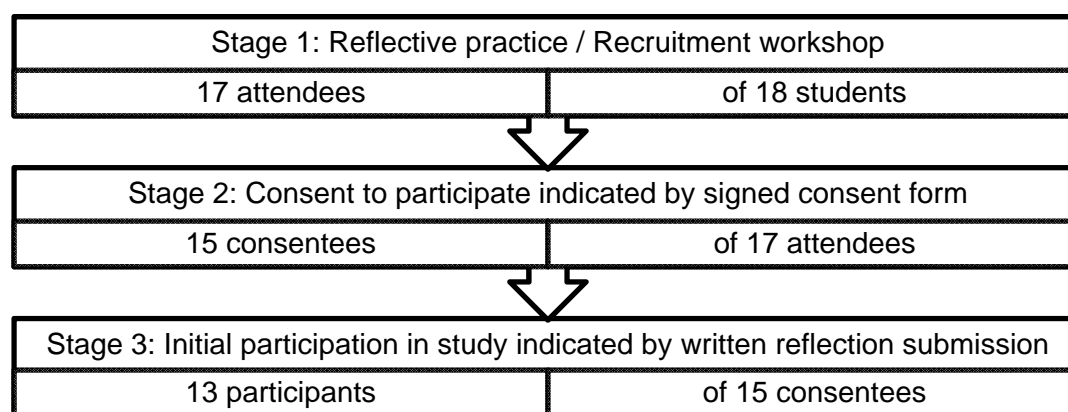


Figure 2: Student participant recruitment numbers by stage

3.3.1.2 Non-student participants: Clinical faculty and supervisors

Non-student participants (clinical faculty and supervisors) were sampled as follows. Three clinical faculty within the audiology school were asked to do an interview once, with one interviewed at each time-point (Figure 1). At Time-point 3, two clinical supervisors from the local community were recruited based on

theoretical sampling. Student interview data at Time-point 2 suggested that these clinical supervisors had supervised many students over the years, and were noting a “difference” in the current cohort. Clinical faculty members and supervisors read the letter of information and signed the consent form shown in Appendix C to indicate agreement to participate.

3.3.2 Demographics

As shown in Figure 2, 15 of a possible 18 students in the audiology cohort consented to participate in the study, but two withdrew prior to participation citing a lack of time. Of the 13 student participants who provided data, two were male and 11 were female. At the beginning of the graduate portion of the audiology program, participants ranged in age from 22 to 27 years.

Of the clinical faculty and clinical supervisor participants, two were male and three were female. Years of experience as a practicing audiologist at the time of participation ranged from a reported 10 to 31 years.

A description of the audiology program in which student participants were enrolled is provided in Appendix D. The audiology program in which students were enrolled was undergoing curriculum review over the course of this research with a new curriculum launched one year following the participant cohort’s graduation.

3.4 Data collection strategies

Two initial data collections strategies – guided written reflections and intensive, semi-structured interviews – were planned. As per constructivist grounded theory (Charmaz, 2006), two distinct methods of gathering data were planned to enhance and enrich the data. However, true to grounded theory, as the study progressed, an additional source of data was sought and is described in Section 3.4.3. Additionally, the *a priori* strategies were refined as per the needs of the developing theoretical findings.

3.4.1 **Guided written reflection and critical incident technique**

The critical incident technique (Benner, 1984) has been used across disciplines to elicit reflection from health professional students and practitioners (Bartlett, et al., 2009; King, et al., 2007; Stark, Roberts, Newble, & Bax, 2006). The critical incident refers to a clinical experience that was so significant, it effectively transformed the student or practitioner (Benner, 1984). The incident can be positive or negative, but must be thought-provoking (Benner, 1984). In the work by Bartlett et al. (2009), students were given guidelines (adapted from Williams, Sundeline, Foster-Seargeant, & Norman, 2000) to describe the incident, to then reflect on thoughts and feelings provoked by the incident, explain the value of the learning experience, and discuss how s/he would change his/her practice as a result. In the current study, I used the guidelines from Bartlett et al. (2009) to help students develop their first (and subsequent if they so chose) written reflections (See Appendix B for these guidelines).

3.4.2 **Intensive interviews**

At each time-point, interview participants were selected based on theoretical sampling, following analysis of written reflections. Initial interview guides (adapted per participant, as the study progressed) for students and clinical faculty/supervisors can be found in Appendix E.

All faculty and supervisor interviews took place in person whereas one student and two new practitioner (former student participants who had begun practice) interviews took place by telephone due to geographic distance. Interview participants were selected if they were perceived to be able to expand on and clarify, or bring new and different insights, to the developing codes and concepts.

3.4.3 **Professional behaviour goals**

A final source of data was drawn upon based on theoretical sampling: the written **Specific, Measureable, Action-oriented, Realistic and Time-Constrained** (SMART: College of Physiotherapists of Ontario, 2008) goals from the

Comprehensive Professional Behaviours Development Log - Audiology (CPBDL-A: Ng, et al., 2008; Ng, Bartlett, & Lucy, 2010). The CPBDL-A was administered throughout the audiology students' education program as part of my overall doctoral program of study; however, the quantitative data from this measure are not a part of my dissertation. As part of the CPBDL-A, students were asked to write brief SMART goals, about their plans for development of each of the professional behaviours, which included: accountability, adherence to legal and ethical codes including monitoring relationships with hearing instrument manufacturers, best evidence and evidence-based practice, client-centred practice, communication, critical thinking, empathy/sensitive practice and respect, lifelong learning, professional image. These written goals served as a data source for anticipatory and written reflection focused on professional behaviours and goal-setting. An example of how these data served the theory is shown in Appendix F.

3.5 Procedures

3.5.1 Reflective practice workshops

Two months prior to beginning their first full-time external clinical placement (and mid-way through their first in-house part-time placement), 17 students (of 18 in the cohort) accepted an invitation to an introductory reflective practice workshop and study recruitment session. The 45-minute workshop began with a brainstorming session on definitions and sources of knowledge as it pertains to practice, included definitions and examples of reflection and reflective practice (including reflection-in- and reflection-on-action, critical and written reflection), raised consciousness to the need to be aware of assumptions, and concluded with a question-and-answer period. Excerpts of workshop materials and the guideline distributed to students to help with written reflections and can be found in Appendix B. At the end of the workshop, I outlined expectations of study participation and participants read letters of information and signed consent forms (Appendix C).

Based on data gathered from interviews that took place at Time-point 1, a second workshop was conducted two months prior to the start of the second full-time external clinical placement, to refresh participants on reflection and reflective practices and to encourage continued participation in the study. Two Time-point 1 student interview participants specifically suggested this as a strategy for continued encouragement of reflection and study participation. All 13 remaining student participants attended the workshop. At this workshop I read aloud excerpts of reflective pieces written by surgical residents, shared (with permission to read aloud but not distribute) by a researcher in medical education (White, 2009). I also shared some reflective writing that I had written and published (Ng, et al., 2010) to stimulate critical reflection and thinking about practice and professional issues.

3.5.2 Data collection procedures

3.5.2.1 Written reflections and interviews

Recall that written reflections and interviews were completed in an alternating fashion, with interviews following written reflection submissions at each of the three time-points. The goal for written reflections was to have all student participants complete all three written reflections.

Table 2 shows the actual number of participants who contributed each type of data at each of the three time-points. A total of 26 written reflections served as data sources. The four students who completed the third and final reflection completed all three written reflections. A total of 12 interviews involving 11 participants were conducted across time-points. Two students were interviewed twice each, at Time-points 1 and 2. The two community clinical supervisors were interviewed together, as per their request. Across data sources, a total of 18 participants (13 students, three clinical faculty, and two clinical supervisors) contributed data to this research. The three student participants interviewed at Time-point 2 were about to embark on their professional careers, and all the student participants at Time-point 3 were working as new practitioners.

Table 2: Number of participants per data source and time-point

| Time-point | Data source | Number of students ^a | Number of clinical faculty/supervisors |
|------------|-------------|---------------------------------|--|
| 1 | Reflection | 13 | N/A |
| | Interview | 3 | 1 |
| | CPBDL-A | 13 | N /A |
| 2 | Reflection | 9 | N/A |
| | Interview | 3 | 1 |
| | CPBDL-A | 13 | N /A |
| 3 | Reflection | 4 | N/A |
| | Interview | 2 | 3 ^b |
| | CPBDL-A | 9 | N/A |

N/A = not applicable

a: At Time-point 3, these students were new practitioners

b: Two of these participants (clinical supervisors) participated in one joint interview

Interviews for Time-points 1 and 2 took place in person with the exception of one telephone interview for the Time-point 2 due to geographic distance. For the third round, the two new practitioner interviews took place by telephone because the former students were out in practice across the country.

In addition to student interviews, for my initial sample I had planned interviews with faculty members after each round of written reflection submissions. Faculty members were only to be sampled if data analysis suggested these additional interviews may provide supplementary information.

Interviews lasted from 30 to 60 minutes, with an average length of 45 minutes. Details about data management are outlined in Section 3.7.

3.5.2.2 Written professional behaviour goals

Thirty-eight sets of CPBDL-As from the parallel but separate research study (Ng, et al., Accepted Jan 17, 2011), were also sampled as data sources based on theoretical sampling. Data were sampled from the 13 student participants' professional behaviour goal submissions across three time-points of data

collection. As shown in Table 2, all 13 participants contributed their CPBDL-As at Time-points 1 and 2, with only nine submitting their CPBDL-As at Time-point 3.

These CPBDL-A written goals were theoretically sampled (see example in Appendix F) to serve as additional data for the theoretical question of students' use of reflection, given the anticipatory reflection revealed through the goals. These data informed data analysis relating to anticipatory reflection, goal-setting, self-assessment and other developing concepts within the eventual theory.

3.6 Ethical considerations

I ensured that I would not be placed in a formal teaching position with the cohort of students who participated. However, each year I do volunteer to take some students for observations of my practice as an educational audiologist on an informal basis. Five of my student participants shadowed me for one day each in an informal observation opportunity.

I did not wish to be in an authoritative position in relation to my student participants because this may have affected their reflective pieces. I further acknowledged that elicitation of reflection may have posed a risk to students in that they may have written or spoken about sensitive topics for which I may have been ill-equipped to counsel (Boud & Walker, 1998). In anticipation of this possibility, I planned to consult my doctoral supervisors for guidance on how to handle such a situation. However, this situation did not arise. The use of a guided approach to the reflection pieces was also thought to assist in managing this risk, but the possibility of sensitive topics needed to be considered carefully at the outset of the study.

3.7 Data management

The contents of the written reflection documents were entered into NVivo 8 software for analysis, identified by a participant identification number (ID) (QSR International Pty Ltd., 2008). Student participant IDs were randomly assigned between 1001 and 1018 and clinical faculty/supervisor participant IDs were

assigned between 2001 and 2005. Written reflections were stored in the following filename format: [ID]-[time-point number]. For example, for participant 1012's second written reflection, his/her submission was identified as 1012-2.

All interviews were recorded on a digital recorder. Recordings were transferred to a computer for verbatim transcription. Transcribed interviews were stored with the filename format [ID]-[time-point number]-"interview" such that an interview at the Time-point 1 with participant 1012 would be identified as: 1012-1-interview. Transcribed interviews were also entered into NVivo 8 to help organize data from submitted written reflections and transcribed interviews in one place for coding purposes.

Theoretically relevant data from written professional behaviour goals were stored as hard copies, identified by [ID]-[time-point number]. None of these data were used for direct quotation purposes but rather to enrich and inform data analyses (for an example of this data use, see Appendix F) and thus did not need to be inputted into NVivo 8. Researcher reflexive journaling was stored in a hard copy personal research journal and these data were transcribed in the writing phase as needed (again, for an example of this data use, see Appendix F). Memos were stored as text documents organized by descriptive titles of developing concepts and were sorted into directories in the sorting process.

3.8 Analysis

3.8.1 Constant comparative method

Data were analyzed with theoretical sensitivity grounded in the literature review of Chapter 1, my worldview and starting assumptions as shared in Chapters 1 and 2, the practice, teaching, and research experiences that I have gained over the past five years, and based on developing codes and concepts as the research progressed.

It is difficult to discuss grounded theory methods in the sequence in which they took place, because the constant comparative method is iterative and nonlinear

(See Figure 3 for a schematic of the embedded and interactive nature of data collection and analyses). The method proceeds as an interaction between data and data, data and categories, categories and categories, and categories and concepts (Charmaz, 2006). The researcher must move back and forth between data analysis and data collection. In the following section, I discuss how I used specific grounded theory methods categorically, but they did not occur solely in the sequential order in which they are discussed. True to grounded theory, processes of data collection, analysis, and memo-writing occurred in a very iterative and interwoven manner. Appendix F outlines the process of the development of one initial code through to theoretical sampling, advanced memoing, and integration in the theory. This single code example serves as a source of transparency for the reader to gain insight into the analysis process used in this research. However, given the iterative nature of constant comparative method, it is difficult to represent the process organically; my example (Appendix F) does not capture every nuance of analysis but attempts to approximate it for the reader.

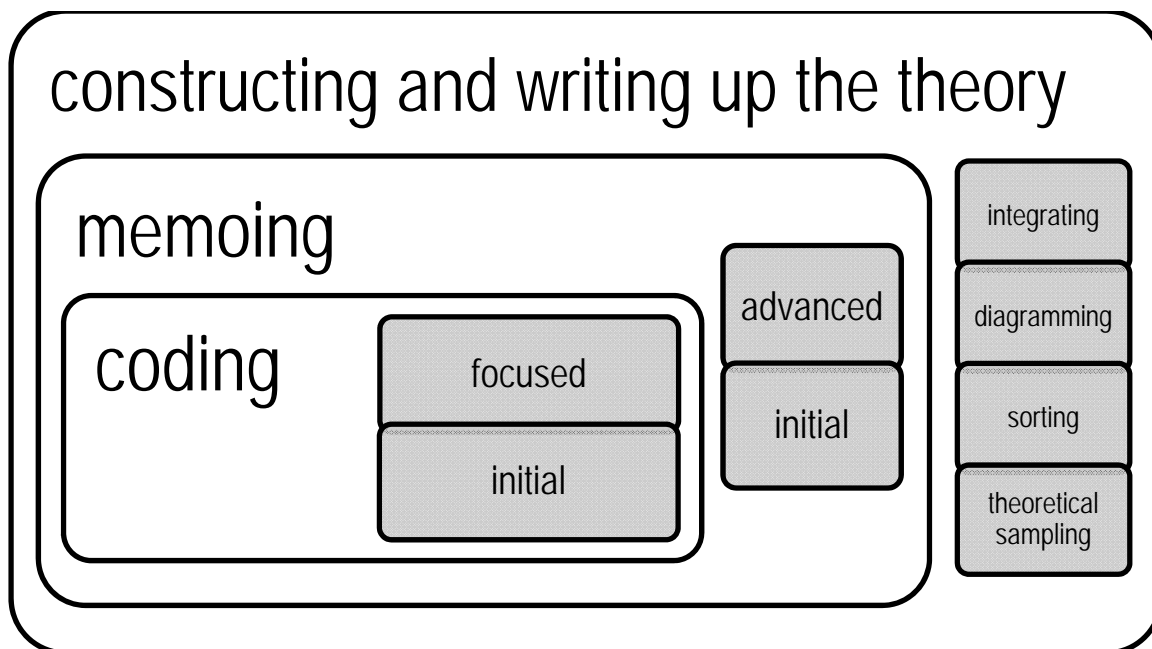


Figure 3: Constant comparative method: A schematic

3.8.2 Theoretical sensitivity

I have disclosed my worldview and my assumptions Chapter 2. I also bring knowledge about reflection and reflective practice from both theoretical and practical perspectives. As is apparent from Chapter 1, I have conducted a literature review on the topics of reflection and reflective practice in audiology. The literature review I conducted became a part of my theoretical sensitivity, and informed the conduct of this grounded theory study. In Chapter 4, when literature informed analysis, the associated literature is cited. I engaged in reflexivity to help ensure that my pre-existing knowledge and assumptions informed my work, were made as explicit as possible, yet did not dictate my findings (0). Notably, during coding and memo-writing stages, I avoided *detailed* review of new, relevant literature because I wanted to be able to openly code without seeing only what I was reading about at that time, knowing that I was already sensitized by my pre-existing knowledge (Bowen, 2006). However, other practice and teaching experiences and incidental exposure to relevant topics through seminars and dialogue with colleagues and peers certainly may have influenced my theoretical lens and thus sensitivity.

3.8.3 Reflexivity

I engaged in researcher reflexivity throughout the data collection and analysis portions of the constant comparative method. I was reflexive through journal writing and discussions with key critical companions (such as fellow doctoral candidates and professional colleagues), to acknowledge and uncover my pre-conceptions and examine how these pre-conceptions interacted with my data analyses. I also had a formal data analysis meeting per data collection time-point with my doctoral supervisors to ensure that I was seeking out external sources of feedback and additional input into data analysis. Relevant reflexive experiences that I believe may have particularly shaped my interpretive lens are discussed in detail in Chapter 5. Explicating my reflexive activities allows the reader to assess how my knowledge, assumptions, experiences, and worldview have influenced the study, analyses, and the developed theory (Charmaz, 2006).

3.8.4 Coding

Coding is the first step in analysis (though it is repeated throughout the iterative process); it refers to the categorizing of data into labelled segments, and begins the process of moving from concrete statements in data to analytic interpretations (Charmaz, 2006). Codes begin the process of selecting, separating and sorting data into an analytic account. For a grounded theory, coding also begins the framework for studying action and processes, toward the development of a theory.

Initial coding remains very true to the data, trying to identify actions, points of view, and categories the data may suggest. Coding at this stage is fairly open-ended, but Charmaz (2006) emphasizes that the researcher's prior ideas and skills influence what is coded. At this stage, initial coding can lead the researcher to discover gaps in the data; codes are provisional in that they may require rewording to improve their fit to the data (Charmaz, 2006). Initial coding may take place word-by-word, line-by-line, or incident-by-incident, depending on the nature of the data (Charmaz, 2006). I planned to use a line-by-line approach, but the

data tended to suit an incident-by-incident approach. Throughout initial coding, a data to data comparison approach is used.

The next step of coding is focused coding. These codes are directed, selective and conceptual. Focused coding involves decisions about which initial codes make most analytic sense (Charmaz, 2006). Again, focused coding does not necessarily take place linearly; a return to initial coding may be called for. Throughout focused coding, comparisons across data sources are required.

Theoretical coding specifies the relationships between categories developed during focused coding (Charmaz, 2006; Kelle, 2008). Theoretical coding is seen as more open and less forceful and limiting of the data than alternative coding approaches in other schools of grounded theory (Charmaz, 2006; Kelle, 2008). Rather than developing a strict frame or matrix, coding families or conceptual guides for coding are used to clarify and sharpen the analysis (Charmaz, 2006). Coding families serve as a conceptual bank from which researchers may develop their thinking about empirical observations in theoretical terms (Kelle, 2005, 2008). Theoretical sensitivity informs theoretical coding, and as such, my theoretical coding was informed by the body of theory and literature reviewed in Chapter 1, the worldview and assumptions described in Chapter 2, and the experiences shared in Chapter 5.

3.8.5 Theoretical sampling

Theoretical sampling occurred after each set of written reflections was analyzed. Based on the contents of the written reflection pieces, I sampled interview participants and data sources to expand on developing codes and concepts early on. As theoretical categories began to take shape, I theoretically sampled participants and sources to confirm, clarify, expand, and even counter these categories and the relationships between them (Draucker, Martsof, Ratchneewan, & Rusk, 2007). The interview questions used in Time-point 2 and 3 were also influenced by theoretical sampling.

3.8.6 Theoretical sufficiency

The process of sampling participants for interviews ceased when data no longer seemed to provide information that contributed to the development of the grounded theory. Theoretical saturation is considered by some grounded theorists as a misnomer; researchers may subjectively decide when they have reached theoretical sufficiency, but depending on the scope of the theory under development, researchers must be careful in stating that they have reached theoretical saturation (Charmaz, 2006; Dey, 1999). I kept this recommendation in mind when I made the decision to cease data collection and declare theoretical sufficiency. Also, given that this study was conducted as part of a doctoral program, and was structured to longitudinally follow a cohort across a pre-determined span of time, these practicalities imposed a strong influence on timelines for data collection. However, despite this practical limitation, I did find it possible to declare theoretical sufficiency across the developed theory, even prior to my final two interviews, which were scheduled prior to realizing theoretical sufficiency. The final two interviews' data were useful; however, they did not add *new* theoretical insights to the grounded theory. Rather, they did confirm and exemplify the developed categories and their relationships.

3.8.7 Memo-writing

Memos are informal analytic notes, which serve as an intermediate step between data collection and writing a paper and help explicate codes as conceptual categories. According to Charmaz (2006), memos may include any of the following: comparisons between data and data, data and codes, codes and codes, codes and categories, categories and categories; raw data; empirical evidence to support definitions of a category and analytic claims; conjectures to check in the field; identified gaps; details about processes. Memos help grounded theorists seek patterns in their data, which is a necessary component of theory development (Charmaz, 2006). I used memos as described by Charmaz (2006), as a step before the writing of my dissertation, raising codes to

the level of conceptual categories. These memos in turn formed the basis of the developed theory, once linked and organized as follows.

3.8.8 Sorting, diagramming, and integrating

Developing categories were sorted, with memos and their representative quotations paired, linked with other categories, and organized into theoretical frameworks. Diagramming was conducted using a flow-chart technique to begin to group major categories with related focused codes and to begin to link categories to one another. Diagramming led to the integration of the theoretical insights that had begun to crystallize through memo-writing. See Appendix F for an example of one sorting and integrating diagram. The software used to complete this diagramming was XMind 3 (XMind LTD, 2010). At this point in the data analysis process, writing was also underway, with the simultaneous interplay (as shown in Figure 3) of these tools moving me toward the construction of the grounded theory.

3.9 Design considerations

3.9.1 Influence on participants

A key point to acknowledge is that simply by engaging students in reflective activities, I may have impacted their experience and development. This impact was not seen as a problem, because I was not attempting to evaluate how well the current program prepares students to be reflective practitioners in a controlled manner. Rather, I attempted to develop a theory of the enactment, development, and roles of reflection within the journey from student clinician to audiologist. Although I did introduce the theory of reflection and reflective practice to this cohort, thus raising their awareness and facilitating their understanding of the concepts, I otherwise played a very minimal, arms-length role in their overall education. In Section 5.5.1.1, I address my impact on participants in more detail.

3.9.2 Elicited, guided, written reflection

Several students requested flexibility in submitting written reflections that were not directly related to one critical incident, and the entire sample was thus informed that they could use the guideline as a general guide, but were welcome to branch out and reflect on multiple experiences if they did not wish to choose one critical incident for their future writings. Other students expressed appreciation for a guide because they had never written something of this nature before and needed some guidance and starting points.

3.9.2.1 Researcher response to written reflections

As per the arrangements made with the audiology program, I did not provide feedback to students on content knowledge (such as accuracy of theoretical statements or clinical procedures) but rather encouraged deeper thinking and questioning around experiences, assumptions, and reflective processes through thought-provoking questioning. Section 4.7 includes examples of the type of feedback students received on their reflective writing pieces.

3.9.3 Interview guides: from semi-structured to loosely guided

Initially, semi-structured interview guides were piloted on two audiologists, one with limited clinical experience and a general awareness of reflection and one with significant clinical experience and limited exposure to the discourse of reflection. The initial purpose of the interviews was to elicit participants' thought processes about the topic of reflection as it related to their practice and development. However, as the study progressed, theoretical sampling led to the use of a loosely guided intensive interviewing style beginning with the repeated interviews at the Time-point 2. As the data analysis progressed, the initial interview guide was too limiting in scope of topics elicited for discussion. Theoretical sampling indicated a need for a broader approach to the interviews. So, a loosely guided intensive interviewing style was adopted in which a few open-ended questions were posed to lead to a conversational interview (Charmaz, 2006). I probed for specific questions pertaining to processes of

reflection that were developing in the analysis of previous data, posed a small number of questions from the initial interview guide depending on the participant and conversation, but also asked participants to speak openly and freely about their development and practice in general. From this general conversation piece, I was able to analyze for tacit processes of reflection and development within their stories, observations, and reflections shared in the interview.

3.10 Quality considerations

Charmaz (2006) states that expectations for grounded theory studies vary depending on the discipline, department, and school of grounded theory. She offers the following criteria as a starting point for assessing the quality of constructivist grounded theory. I subscribed to these criteria to provide evidence of the rigour and quality of my grounded theory study.

3.10.1 Credibility

Charmaz (2006) suggests that the research should achieve intimate familiarity with the setting or topic, involve sufficient data to merit claims, provide systematic comparisons between observations and between categories, include categories that cover a wide range of empirical observations, provide strong logical links between gathering data and the argument and analysis, and provide enough evidence for claims to allow the reader to form an independent assessment (and agree with claims). In this study, credibility is shown in Chapter 4 through exemplary quotes to support the theoretical claims. The three different data sources (Section 3.4), sampling of clinical faculty/supervisors in addition to students/new practitioners, and multiple time-points of data collection were thought to contribute to the credibility of the study, providing the potential for rich data.

3.10.2 Originality

Charmaz (2006) suggests that grounded theory categories should be fresh, offering new insights, provide a new conceptual rendering of the data, have and

state social and theoretical significance, and challenge, extend, or refine current ideas, concepts, and practices. Originality of the grounded theory is explored in Section 5.6.1.2

3.10.3 Resonance

Charmaz (2006) states that grounded theory should portray fullness of the studied experience, reveal both liminal and unstable taken-for-granted meaning, draw links between larger collectivities and individuals, make sense to the participants or other stakeholders and offer them deeper insights. As per theoretical sampling and the resonance consideration for quality criteria, developing concepts and categories found through data analysis were introduced to interviewees at Time-points 2 and 3 to “check” on the resonance of the developing concepts and categories with participants (Section 5.6.1.3).

3.10.4 Usefulness

Charmaz (2006) states that the analysis should offer interpretations of practical importance, suggest generic processes and examine their tacit implications, spark further research in other substantive areas, and contribute to knowledge, making a better world. The potential implications and usefulness of this study are discussed in Chapter 5.

3.11 Development of the grounded theory: Overview

After each submission deadline for written reflections, I performed initial coding, often using *in vivo* (direct words of interviewees) codes to identify what participants were writing about, staying very close to the data at this point. Interview data were analyzed first with initial coding, followed by coding with the developing focused codes from the elicited written reflection data. Focused coding began as part of the first round of data collection and these focused codes served as a framework for subsequent data analyses. Each time-point was still coded first with initial coding to allow for new codes to develop apart from the previous time-points codes. So, the theory began to take shape after Time-point

1, with each subsequent time-point adding to or modifying the codes from previous time-points. Once memos were written based on focused codes and other developing theoretical concepts, the construction and writing of the grounded theory section was underway. The organizational framework already existed from the way the memos and focused codes were coming together and relating to one another thus forming theoretical codes. Diagramming further developed relationships between categories.

Chapter 4

4 The grounded theory

The process of the constant comparative method allowed the theory that follows to develop from: elicited written reflections across the three time-points (after first external placement, after second external placement and after two to four months of practice); intensive semi-structured and loosely guided interviews with students, new practitioners and clinical faculty/supervisors; and written goals from the CPBDL-A, completed as part of a separate but parallel study of professional behaviours development by students. The impact of the researcher's lens on the theory is made as explicit as possible through reflexivity in Chapters 1, 2, and 5.

What began as a study focused on reflection in the context of development, evolved with the data into a study about what reflection reveals to us about student and new practitioner development, what reflection affords to students and new practitioners, and how reflection is developed in students and new practitioners. Further, given the longitudinal nature of the study, and the reflective writing and interviewing that took place over time with students and new practitioners, the process of audiology students' development as professional practitioners was in itself theorized from the experiential and reflective data.

4.1 The overarching grounded theory: The role of reflection in audiology students' development as professional practitioners

The constructed theory is multi-faceted and multi-layered. At the basic layer, the development of students from the label of student clinician (the terms used by students to denote their role when signing off on reports) to that of professional practitioner, health professional, or registered/licensed audiologist (the terms used by audiologists to denote their role when signing off on reports), is theorized as it is a process in itself. The layer of reflection that has been applied as both

the theoretical focus and data elicitation method was initially the primary focus of this research. However, the students' development as professional practitioners could not be ignored in the theorization addressing the overarching question: How is reflection enacted and implicated in audiology students' development as professional practitioners? In fact, the evolution of students as practitioners emerged strongly as a central or core process around which reflection's role and enactment took shape.

Through early analysis (initial coding followed by focused coding) of elicited reflection and interviews, the theory began to be developed, forming three distinct but interconnected facets, together forming a prism. Each facet represents one major process within the larger theory, surrounding and supporting the central facet, the process of the evolving practitioner. A prism with multiple facets was chosen because a reflective prism consists of facets that are interconnected and thus related. One can look through any part of a prism and see its many facets and their interconnections. Turning the facet to look from a different angle allows for a different perspective. The facets initially served as focused codes and theoretical questions, which were continually refined through the data collection and analysis process, leading to sorting, memoing, and diagramming to form the overall theory. Specific properties exist for each facet, which make up its existence. In the theory, these properties explicate the details of the processes represented by the facets. A cursory summary of this description is depicted in Figure 4 as a Prism of Reflection.

1. **Reflection as a window**, through which we may begin to understand the student experience, especially emerging tacit values, readiness, capacity, and trajectories of development, supervisor relations and placement experiences, and self-perceptions of readiness and competence.
2. **Reflection as a tool**, one of many tools that students can use to become professionals, and for continued professional development. Reflection helps students with emotional self-care, professional socialization, navigating challenges, re-affirming their experiences and learning from experiences, and

developing their critical consciousness. Reflection is a particularly useful tool during emotional, challenging times.

3. **Reflection as a developing behaviour** on the journey from student clinician to audiologist. This behaviour is important, and not everyone will develop it to the same degree. Trajectories are unique, yet can be inspired, fostered, and developed through writing, critical incidents, and faculty/supervisor guidance.

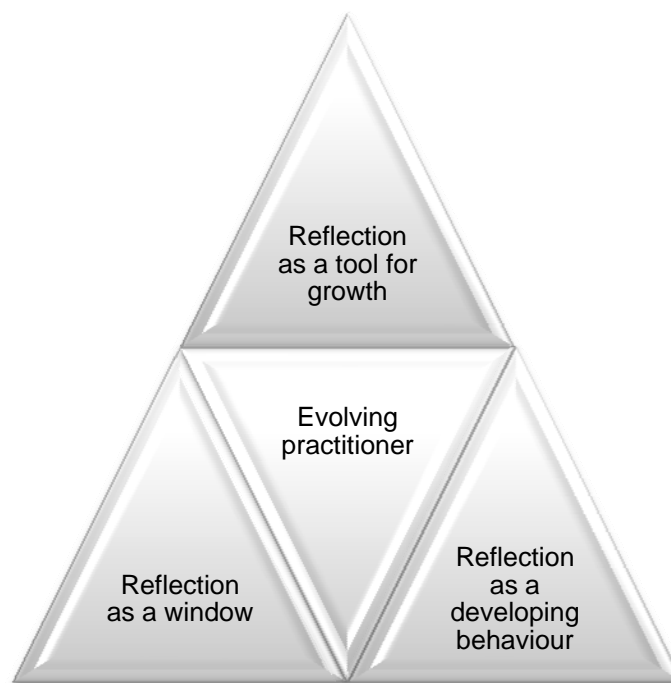


Figure 4: The prism of reflection: The three linked facets of the role of reflection in audiology students' development as professional practitioners

These three facets are described in detail in Section 4.3, with the overarching journey of moving from student clinician to professional practitioner (evolving practitioner) explored last. Note that all three facets (seen in Figure 4) are connected and the underlying process of moving from student to professional is central to them. Theorizing how reflection can be useful to supervisors, mentors, and instructors of professional students in terms of understanding students, and how reflection is useful to students in their development (what it offers), can offer ways to foster reflection and professional development in students. The third facet, "reflection as a developing behaviour," begins to tap into the tacit

enactment and development of reflective practice in these new professional practitioners. This understanding is important for the former reason of fostering reflection, but also contributes to broadening our understanding of reflective processes in general.

The central facet indicates that there is a central process, which acts as the context for the theorizing of reflection. After looking at the developed theory in detail, per facet, the role of reflection was seen as supportive to the central developmental journey of becoming a professional practitioner. This perspective is thus explored and discussed at the end of this chapter.

4.2 Presentation style and format

“The purpose of a grounded theory study is to emphasize the researcher’s theoretical reformulation of the data, while the data themselves only appear to support the theory” (Backman & Kyngas, 1999, p. 151). The detailed elucidation of the theory and its individual facets and properties below occurs in a certain style that must be explained to prevent misunderstanding of intent. The theory is outlined concept by concept, with individual conceptual properties discussed in some depth. Quotations from participant data serve as supportive evidence for the theoretical claims. The theory is described with the rhetorical approach of inductive argument in the present tense. That is, the theory is described in a way that provides a collective impression, and is supported by *exemplar* quotations, without an overly technical rendering of the data. The constant comparative analysis process (one example of which is provided in Appendix F) ensured that theoretical claims were based in a thorough analysis of the data.

I adhered to recommendations for writing up the grounded theory from Charmaz (2006) including her suggestions for novel work. Charmaz (2006) does not recommend the use of many sub-categories, *except* in especially novel territory. In novel territory (like the current study), sub-categories can be helpful in clearly articulating a theory because there is little to otherwise ground readers in the phenomena (Charmaz, 2006).

The abstracted theory below is tied to its context, yet does not necessarily represent the experience of every audiology student or clinical faculty/supervisor, nor does it represent the exact experience of every participant in the study. The theory is a (re) presentation of the phenomena in question. To analyze and write in a way that led to the development of a process-based theory, I specifically avoided a thematic, descriptive approach (Charmaz, 2006). Rather than themes backed by data, I aimed for process-based concepts made up of categories and sub-categories. Conceptualization was backed by actions, and searched for the connections between processes and sub-processes. So, below, I employed a rhetoric that explicated one gestalt-like theory, knowing that this theory is a construction based on interpretations of data within a rigorous process, an interpretive process, and not a consensus-based survey approach. That is, the theory is not merely an organization of data into categories, but rather, is a theoretical reformulation of the data into an abstract theoretical rendering (Backman & Kyngas, 1999).

...even grounded theorists do not have to write as disembodied technicians. We can bring evocative writing into our narratives [...] my voice pervades the passages and persuades the reader although I remain in the background as an interpreter of scenes and situations. Writers' rendering of experience becomes their own through word choice, tone, and rhythm. Voice echoes the researcher's involvement with the studied phenomena; it does not reproduce the phenomena. Yet through struggling with representing our research participants' experience we may find the collective in the subjective (Charmaz, 2006, p. 174).

As per the quotation above, I present not only the concrete theoretical findings directly tied to data. Rather, I also present my own impressions and interpretations (Charmaz, 2006). The format of presentation is as follows. First, each facet is described in reference to its associated figure. Next, each property of that facet is described, beginning with a brief description of the meaning of the property's title followed by a theoretical explanation of the processes encompassed by the property. Supportive, exemplary quotations are used to

illustrate the proposed theoretical interpretations. The properties are described processually when appropriate and are linked across facets when they overlap with multiple facets. Theoretical implications are interwoven throughout the presentation of the theory when these implications are grounded in and supported by data. First person language is used for theoretical extensions that have not been explicitly demonstrated or analytically derived from the data but rather have been derived from the researcher's theoretical interpretation and impression. Interpretations developed with intentional insight from the literature review are indicated with reference to the associated literature.

4.3 Facet 1: The reflection window: Illuminating the personal and the tacit

The possibility for elevated awareness and understanding by those guiding students and new practitioners in their journeys is realized when students write reflections and share them, or have opportunities to engage in dialogue with and about reflection. Although in this study the primary audience was the researcher, in other scenarios the data suggest that the primary audience of reflection may be a faculty member, a mentor, a supervisor, a fellow student, an interprofessional colleague, or other critical companion.

The following personal and tacit properties of student development are illuminated through elicited written reflections and interview data. These properties are illustrated in Figure 5.

1. Challenging experiences
2. Supervisor relationships: The supervisor-student dance
3. Self-perception and working with supervisor feedback
4. Unique trajectories of growth, readiness, and capacity for reflection
5. Tacit values and espoused theories: Tensions revealed
6. Professional identity – becoming an audiologist

As illustrated in Figure 5, the properties are not discrete and unrelated, but are each one “window pane,” linked to neighbouring panes, allowing a view into the

students' personal developmental journeys. The metaphor of the house with many window panes suggests the view into the personal spaces of students that the window of reflection facilitates. Although discussed property (pane) – by – property, the properties of this facet are indiscrete categories organized separately here to portray the multiple processes that together make up the conceptual facet of reflection as a window.

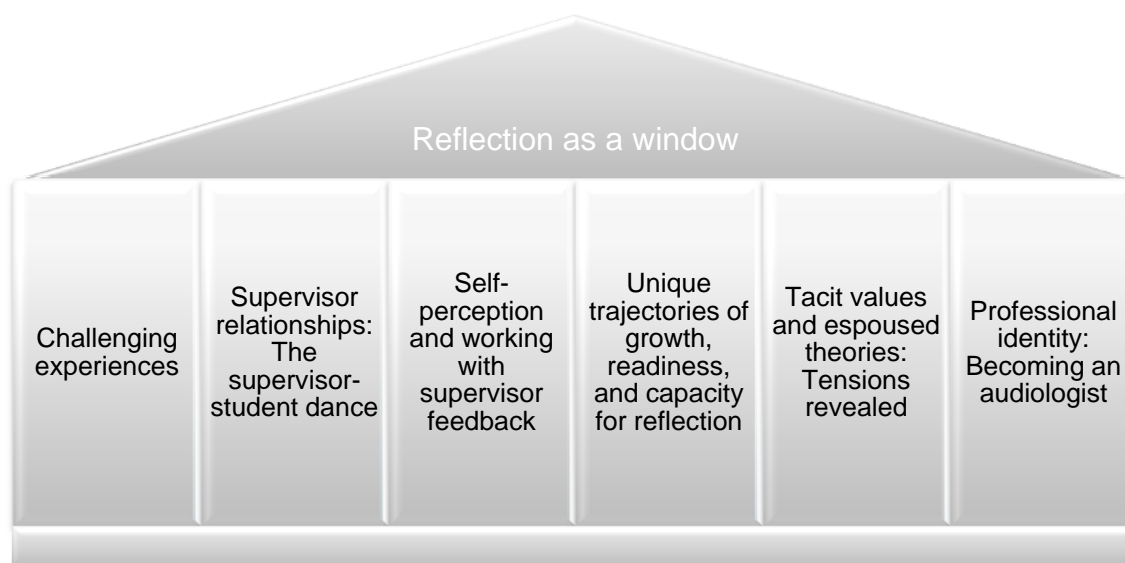


Figure 5: Properties of the facet *reflection as a window*

4.3.1 Challenging experiences

This property is shared by the Window and Tool facets; it is discussed in depth as part of the Tool facet because it fits more strongly with that facet (Section 4.4.4). This property is included here too because a window to the challenges students experience is provided by reflection and I posit that this view to student challenges may be helpful for supervisors and mentors in providing appropriate support.

4.3.2 Supervisor relationships: The supervisor-student dance

This property or window pane allows the “audience” of reflection an understanding of supervisory relationships beyond the explicit evaluation completed by the supervisor. Based on many of the Time-point 1 and 2 reflections, reflection in this context offers students the opportunity to share their

perceptions of clinical placements and supervisor relations. Reflections revealed students' voicing of concerns, for example: about the quality of their learning on placement, their comfort level with their supervisors, and their satisfaction with and appreciation for positive experiences. I extend that these expositions could be important opportunities for faculty and supervisors to monitor external placement site experiences. I also posit that this window pane could create a connection with what is taught and learned in these crucial external parts of the curriculum, into which faculty may not otherwise have a window.

The processes involved in this property (pane) of the window facet posit the role of reflection as a window to understand the student-supervisor dance or experience, particularly to understand what students are feeling and to understand supervisor concerns and reasons for their actions

Student opinions about placements and supervisors, at times reveal their level of maturity and interpersonal skills. A delicate dance exists between student and supervisor, and it seems that mastery of this dance is difficult for both partners.

I felt like she put a lot of pressure on me to like know everything and be as independent as possible as soon as possible which um I guess really isn't my kind of learning style, and it's more of her teaching style and um I think earlier on I would have liked a little more guidance from her cuz like she has 15 years experience. I have none, you know what I mean, so I just think I found that really hard because she kind of just thought I'd be able to do everything and like when a patient comes in the door with a problem with their hearing aids or something I'm not necessarily going to know what to do, but maybe she does because she has that experience cuz she's had patients with similar problems so I would have expected her to kind of like go through and say like "oh this is what I would do this is"...like...kinda teach me more (1007-2 interview).

In the example above, a student expresses discontent with the teaching style of a clinical supervisor. I speculate that if this had been communicated to the supervisor during the placement in a respectful and effective manner, perhaps

the supervisor could have explained the rationale behind her style, or slightly adapted her style if she thought the student's concerns held merit.

Also, the window offers us a chance to learn of supervisors' concerns about students, and to discuss the dance that occurs between student and supervisor.

... I always hope that or what I try to be is be supportive. So sure things aren't always going to go perfectly but do you feel that when you have a problem that I'm here to support you or that I'm here to judge you and I try to always make it feel that I'm there to support them and so a lot of times too when I'm searching for student to grow or to develop it's um through their own realization so questioning rather than telling um I find for me works really well. So um you what are you going to do next or when they ask a question sometimes responding with a question which they always hate right they look at you like "I want the answer" but ultimately again there's that much more rapid growth ... when they've come to the realization themselves and so often too um it's a lack of confidence so basically they already know what they want to do and they're asking me just to feel supported in that ... (2002-2-interview).

The supervisor's comments above demonstrate the dance from the supervisor's perspective. The lead in the dance may be different depending on the individual partners, and the context of the situation. Further, negotiating the dynamic roles within this partnership can be challenging, especially when the two partners have differing perspectives on their roles. Also, these roles may or may not be explicitly discussed, making it even more challenging to fill each other's expectations.

In reflecting on the supervision relationship, the supervisor may also grow in his/her supervision style and skills. The above examples demonstrate the value of a joint student-supervisor reflective journal (which some students experience), or of reflective dialogue if this is a preferred and comfortable option. Both student and supervisor could explain, express, contemplate, and reconsider their own and the other's actions, reasons, rationales, preferences, and/or concerns.

This particular property relates to the fostering of reflection by supervisors, discussed in Section 4.5.3.

Reflection allows students and supervisors some opportunities, which in the case of shared reflection, allow the audience a window into some otherwise private experiences. For example, in this study, student reflections reveal: how they think critically about their interactions, inner fears and pride, expectations of the supervisory relationship, and explanation of supervisor/supervisee actions taken. If done in writing, this interaction could take place in a way that is potentially safer than a face-to-face confrontation or conversation. This is not to say that reflections on supervisory relationships should always be made available to the supervisor, for the safe space that is provided by the elicited reflective writing could be compromised in this way. However, some participants engaged in shared reflective writing because it was a supervision tool of some supervisors. This approach, suggested by the data, could open the window to the student-supervisor dance.

4.3.3 Self-perceptions and working with supervisor feedback

This window pane allows a glimpse into student self-perception, a personal property of the concept of reflection as a window with interpersonal implications. Tied to self-perception is students' management of feedback from supervisors. In this pane of the window provided by reflection, self-perceptions, receptiveness to and reliance on feedback are illuminated.

Through reflection, many students conduct self-assessments (this concept is problematised in Section 5.3.6) of their readiness for independent practice, and their competence with particular tasks. For example:

My confidence in my test results and in my knowledge base also needs to be increased before working in an IHP [Infant Hearing Program] position (1005-2).

Self-assessment can be inaccurate in and of itself (Eva & Regehr, 2005; Eva & Regehr, 2008), but combining self-assessments with dialogue with a supervisor

or mentor may help improve the accuracy and depth of self-assessment, as suggested by the data. For example:

I think that identifying the problem areas and coming up with a plan to address them really helped me out and I'm glad that I did it early on. As it turns out my supervisor had said that he was a bit worried at first but that after addressing the problems I made great improvements and he was actually impressed with my abilities (1012-2).

Self-assessment and reflection upon competence, with input from another can assist in setting goals (Section 4.4.6). Through a window opened up by reflection, supervisors may be able to evaluate a student's self awareness and self-assessment, in order to help calibrate students' judgment of performance to be more in line with professional expectations of competence.

Student receptiveness to feedback may be an important aspect of supervisor relations, too. This trait varies across students and stages. In the following example, supervisors reflect on some students who prefer not to receive feedback:

2003: I think that mostly just small things we've noticed from students of this generation - things like wanting to schedule an interview and go through how they managed and they're saying well they really don't want to do that just send me the mark so you know what I mean? That seems to us like a fairly big thing because we maybe want to discuss what they did, what they've done, what they should work on, give them a little bit of help along the way and then it's just oh I pretty much know how I did and I'm not really interested and that kind of thing ...

[Researcher: really, that's basically turning down feedback]

2004: Yeah, they don't need the feedback because they already know their strengths and weaknesses [...] if you already know all that then maybe you should just get a job and forget about the rest of your schooling (2003 and 2004 - 3- interview).

Conversely, in the example below, a supervisor discusses students' desire for feedback.

...you know I find that really most of our students are very receptive to feedback. I mean basically they want feedback and I think they often comment that sometimes they don't feel they get enough some of them want too much feedback they just want every little thing they do recognized in some way where my feeling is if you're doing things and they're going well I don't need to interfere and sometimes by interfering I break the flow of what you're doing and so um the fact that it's going and you're continuing should be part of what is feedback for you and I don't have to say [...] if there's any risk of harm or danger but sometimes we have to be allowed to go there right and to do it and then realize and it's in the realization that we learn far more quickly than if I keep telling you no you have to do this and you have to do that (2002-2-interview).

At times, students can appear to supervisors as overly dependent upon feedback (as expressed in the supervisor's reflections above. Balancing the need for feedback with the need to develop independent clinical reasoning is described as challenging by some students and supervisors. Receiving critical feedback can be difficult. However, when students are receptive to feedback, reflection upon the feedback and related actions can help inform their self-perception and promote growth. For example:

While hearing this feedback was difficult, because I thought I had been putting forth a sincere effort, I did not let it get to me and I really tried to think about whether I was engaged in an active thought process while in the clinic. I knew that I needed to be accountable for what had happened. If this had occurred at my place of employment I would need to be able to thoughtfully explain the situation and continue to work with the client. I have always taken pride in my ability to be an understanding and caring individual who sees the individual first and not necessarily the task in a clinical situation. However, on this particular day I realize that I was very self-centered in my approach and not thinking enough

about the client. When I was not able to obtain results, instead of being in sync with the client's situation and communicating with the client further in order to ascertain the problem, I remember being nervous about the fact that I was not performing well. It is difficult for me to admit this, but it is the truth (1008-2).

As in the example above, student perceptions of self versus the feedback they receive can serve as a tension, a source of discomfort, a place for reflection upon the differences between espoused theories and theories-in-use (Kinsella, 2001). Theories-in-use may be difficult to identify for students, unless illuminated by supervisors. In these tensions, reflection can be especially useful in comparing one's own perception with the perception of another, whether a supervisor, mentor, client, or peer. Through the other's lens, students may be able to re-align their perspectives.

I posit that this window into student self-perception and dealings with feedback may allow for a student-centered model of supervision and mentorship. If students' guides can better understand student intention and perception as a source of reference or comparison to their observed performance and if these guides can also understand a student's personal style for receiving and making meaning of feedback, the supervision/mentorship style can possibly be improved. Compromise, by both partners, may be necessary to master this student-supervisor dance for optimal learning and growth. The window to this property of self-perception and feedback reception may thus be helpful in improving the dance.

4.3.4 Unique trajectories of growth, readiness, and capacity for reflection

This particular window pane reveals the uniqueness of students' "stage" of development. Each student's growth is unique, and supervisors acknowledge and respect this notion. Supervisors can attempt to foster growth in students regardless of their capacity and current level, but often they must align their fostering with the student's *readiness*.

... I think that [...] cuz we're different people by nature, and also, at this point they're at different levels, like what they can and can't do, like some students take to doing diagnostics much faster than other students do, and so they can... that frees up [...] part of their mind to be able to focus on troubleshooting what's happening in the moment... (2001-1-interview).

Likewise, students are often able to articulate that there is a personal component to reflection and that one must be “ready” for reflection for it to be meaningful or effective. For example:

... it's almost like a individual thing too, the person has to wanna do it, and be ready for it, so um....I dunno a faculty member could say “you should reflect” and you can do it, but you have to be ready for it...(1012-1 interview).

Supervisors talk about the importance of reflection for development as a professional, but that reflective capacity may be greater or the tendency to reflect more natural, in some than in others.

...Some people may be given that as a - for lack of a better word – gift [...]. Along the way some people may have to actively work at it um I know for myself, I don't know whether it's that has happened as a timely fashion and also as I get to this stage of profession and I don't necessarily know what the start [...] As I get to this stage in the profession I see [reflection] as probably the most important aspect of what we do. We have to be technically sound, we have to be good problem solvers, but more...but probably the hardest part and most rewarding part is understanding the patient and that involves understanding yourself and the reflective process (2005-3-interview).

For those who need to work at reflection more actively, supervisors (all five in this study) do believe that it is possible for all students to grow, at their own pace and in their own way. Not every student is naturally inclined to reflect, and ultimately practitioners may use, develop, embrace, and/or value reflection to varying degrees. However, if reflection is believed to be a tool of a good practitioner, then

concerns about how to foster its development are relevant. The following quotation demonstrates one supervisor's belief that we can foster reflection despite varying capacities:

I don't think it's totally personality, I think you can [develop it], some of the people who are maybe not as naturally gifted in using these skills can be taught these skills to a degree, and I think naming them and showing them what they are makes it easier for people [...] the students I think, if you kinda give them an idea what it is you're talking about, then I think they can start to say "oh, that's what I'm doing, maybe I should do more than that. Maybe I should take some time with the chart, have a look at it, reflect about what I did, and what I want to do in the future" (2004-3 interview).

From this view to students' unique stage, I posit that enabling each student to reach his/her potential as a reflective practitioner may begin with an awareness of where the student is in the stages of development as a reflective practitioner. This awareness may be helpful for supervisors in inspiring and fostering reflection (Section 4.5.3) with consideration to the individual readiness and propensity of each particular student. The data suggest that reflection, in this property, serves as a window to where students are in their unique trajectory of growth. I posit that this is of use so that students' guides may provide learner-centered supervision or mentoring.

4.3.5 Tacit values and espoused theories: Tensions revealed

Reflection offers a window to students' and new practitioners' personal and tacit values and beliefs (Polanyi, 1958; Schön, 1983). These values and beliefs are sometimes challenged by reality. In these instances, students use reflection to experience the tensions - thus revealing tacit values they may not have known they had - to attempt to resolve dissonance or simply to give attention to their tensions through writing or dialogue. Following is an example of the tension encountered by a student when his/her tacit values of health professional

practice and espoused theory of client-centered practice are met with the reality of his/her practice setting.

I understand that private practice is a business and making money is necessary to stay open and put food on the table etc. However, audiology is within the healthcare field. We are trying to help people with hearing loss. These companies say that “patient care comes first”; however, when people who have no experience in the field/industry are running these companies all they care about is profit and making as much money as possible. Being in school we are taught about the theory and the diagnostics and research and doing what is best for the patient. Sales or profitability are never mentioned so as a new grad just starting out in private practice that mentality from higher up management in the company is completely shocking. I did not attend 7 years of university to be a sales person and my nature/personality is probably the worst sales person ever! That might make me not cut out to be a clinician in private practice but my supervisor said the same thing, that she was not a sales person and she would never force a person to buy hearing aids. I think most clinicians feel this way; however, management tends to only focus on sales. It is not what I had anticipated at all, even when I was being interviewed “patient care” is stressed upon me; however, I felt patient care is the last thing on their mind. Maybe I was very naïve to the sales aspect of audiology but like I said it is not even a factor in the 3 years of schooling (1007-3).

This new practitioner makes use of the reflective opportunity to affirm her own values and beliefs for patient care and to acknowledge that companies must seek profits. Finally, she is able to relate her lack of preparation or know-how to a lack of exposure to the “sales aspect of audiology” in her “3 years of schooling.” Multiple instances of data suggest that the opportunity to name the source of the perturbation experienced is potentially helpful in itself.

A window into this commonly mentioned (in this study and others) (Ng, et al., 2010) tension experienced by new practitioners in audiology may assist those

educating new audiologists in preparing them for this practical reality. That is, I suggest that a window to these tensions may facilitate better preparation, thus enabling students to enter the workforce ready to wrestle with such issues instead of feeling powerless or becoming disillusioned.

In a similar situation to the example above, another new practitioner resolves the dissonance, demonstrating that there is an individuality of experiences that seem similar on the surface.

I think by going into the profession [...] I wanted to be working on people and helping people like so that's what I was kinda surprised with myself when I was like "I'm going to go work with [company name]." Cuz I always thought like oh a big chain they don't really care about their clients and blah blah blah. but um...I'm finding like ... that I was kinda wrong in that thinking and that um just because we like are selling hearing instruments and making a profit that it doesn't mean well I don't care any less about my clients than when I was up North and trying to do some screenings and get those kids down for tubes and that sort of thing (1013-3 interview).

Comparing across participants allowed for dominant discourses and espoused theories, held by students, to become apparent. The data suggest that dominant discourses in the profession and in school seem to become students' espoused theories, perhaps (I posit) because students have less exposure to experiences that may offer alternatives with which to question or resist the dominant discourse. The impact of these dominant discourses in shaping espoused theories is evident in student and new practitioners' written reflections.

This particular property of a window to tacit values and espoused theories and the tensions encountered links to the notion of reflection upon espoused theories versus theories-in-use. Some extensions of this theoretical finding are thus discussed briefly here. The discrepancy between espoused theories and theories-in-use allows students to identify the mismatches between what they believe in, and what they enact (Kinsella, 2000). This mismatch serves as a

starting point for reflection, an inspiration for it, and an opportunity to consider whether the mismatch is a necessary reality, or a matter of renegotiating a situation for a different outcome (Kinsella, 2000). I extend that it is likely important to attend to the tensions expressed by students because they reflect the realities of current practice and how students are prepared (or not prepared) to face them. These realities are so fast-changing, that for those guiding students who may not be immersed in some of the realities of clinical practice, a window may be necessary in order to be aware of and able to support students through their tensions.

For example, the perceived disconnect between theory and practice is one that is pervasive in students' reflections and comments on their training. However, practice introduces, involves, and necessitates dynamic and evolving theories that are difficult to explicitly teach and are better learned and developed through practical experience. In this study, as students became more confident in their practice, after gaining some experience as independent practitioners, many began to see the importance of theory and noted that they learned appropriate and sufficient theory to guide practice. This change reflects a shift from seeing theory and learning as finite to truly understanding the importance of lifelong learning (Section 4.6.1).

4.3.6 Professional identity: Becoming an audiologist

Becoming an audiologist is a process that others can witness through reflection as a window. Reflection opens up a window to the developmental process of evolving professional identity.

Overall, students may move through the a variety of stages in developing their professional identities:

1. Shapeable identity – doubt and excitement
2. Identifying as an audiologist – pride
3. Place in the professional world: Expectations, meet reality
4. Appreciation

Early on, most students express either their doubts or self-affirmation (more commonly) for their chosen vocation, becoming excited as they complete program requirements to embark on their careers as audiologists. Once practicing, new practitioners seem to experience the highs and lows of their newfound independence as professional practitioners.

Individual/single experiences, when limited in quantity (which is always the case for students and new practitioners), appear to influence identity because students' professional identities are so new. One student's initial placement, with early minor fumbles and insecurities, led to her questioning of her choice in audiology as a profession. Similarly, but in the other direction, others experience emotional events that solidify their confidence in career choice. This prevalent early questioning of the choice of audiology as a profession demonstrates the potential for reflection to provide a window to the early uncertain stages of identity formation.

I was more worried that I had gone into the wrong profession. (1018-1).

But then I also realized that this was one of the main reasons I chose audiology as a profession. Sometime in the future, it will be me in that situation as her clinician and I will get to offer her my support. Audiology is truly a helping profession and the incident motivated me to keep doing what I'm doing and doing it the best that I can (1012-1).

I am still very sure of my decision to become an audiologist. I find it very rewarding to help people improve their sense of hearing. I will always remember the first time a person cried when I put their new hearing aids on. They were so happy that they could hear clearly again, for the first time in a long time. It is people like that that make my job so rewarding and makes me want to come in everyday. I love that part of audiology! (1010-3)

To be able to call oneself "an audiologist" is a common step in the acquisition of a professional identity as an audiologist. Pride in the right to call oneself "an

audiologist” may also evolve as students near this milestone as demonstrated by this student:

Audiologist – I am actually starting to feel more comfortable calling myself that. It's been over 4 months since I've been working and I'm beginning to feel worthy enough to use that term. I still have moments where I have doubts about my abilities, but those seem to be getting fewer and farther between. For the most part, I feel confident in my assessment and treatment abilities. I also truly enjoy what I do, which I find really helps (1010-3).

For the two new practitioners below, with pride comes the realization that being a professional does not mean that respect is automatically granted (in the first example), or that one may not be welcomed quite as expected (in both examples).

When I introduced myself to the receptionist she asked if I had an appointment...I said no, I would be working there. So that was slightly discouraging, not the welcoming I had expected (1007-3).

I felt as though I didn't get a great welcoming at my job when I first started. I felt like I was almost expected to know everything at the beginning and as if they expected me to just jump right in and get started. It was a bit stressful and I found myself working quite long hours to finish my reports and try to find what I should do with each patient. I felt as if they expected me to know how to do everything when I got there and that I didn't really need any training (1017-3).

Meanwhile, others reach a stage of appreciation for the opportunities that their identity as an audiologist provides. For example:

Although there are times when I get discouraged, I know that I am helping a lot of people with a very important aspect of their lives and it is a privilege to work in a career that enables me to do this. I am looking forward to learning more about audiology in the future (1004-3).

Students may move through stages including doubt, excitement, and anticipation, the unexpected, pride, expectations versus reality, and appreciation and optimism or frustration. I suggest it may be useful to those guiding students and new practitioners to have a window to this process, so that they may have an understanding with which to provide support.

Related to professional identity is professional socialization, which involves more of a community-orientation and is explored in Section 4.6.5 as part of the overall development of students and new professionals.

4.4 Facet 2: Reflection as a tool for students: What reflection offers students for personal and professional development

The following eight areas of development are navigated through reflection (Figure 6).

1. Emotional self-care and embracing uncertainty
2. Storying experience for experiential learning
3. Navigating the journey of becoming an audiologist (previously discussed in 4.3.6)
4. Working through challenges: Clinical reasoning and critical thinking
5. Development of critical consciousness
6. Self-assessment, evaluation, and goal setting
7. Development of: Empathy, counselling skills and relationship-centered care
8. Complement to evidence-based practice

The properties above represent personal and professional developmental characteristics for which reflection may contribute to the development process. In Figure 6, picture the central piece as a representation of reflection as a tool, with the processes that are supported by the tool of reflection depicted as the circular shapes surrounding the facet. The tool facet can be rotated to “point” at any of the eight developmental properties of this facet. Although each developmental property is depicted as a discrete property, the properties are interconnected and

overlapping, which is shown by how closely they reside (in contact with the other properties, in fact) within the figure.

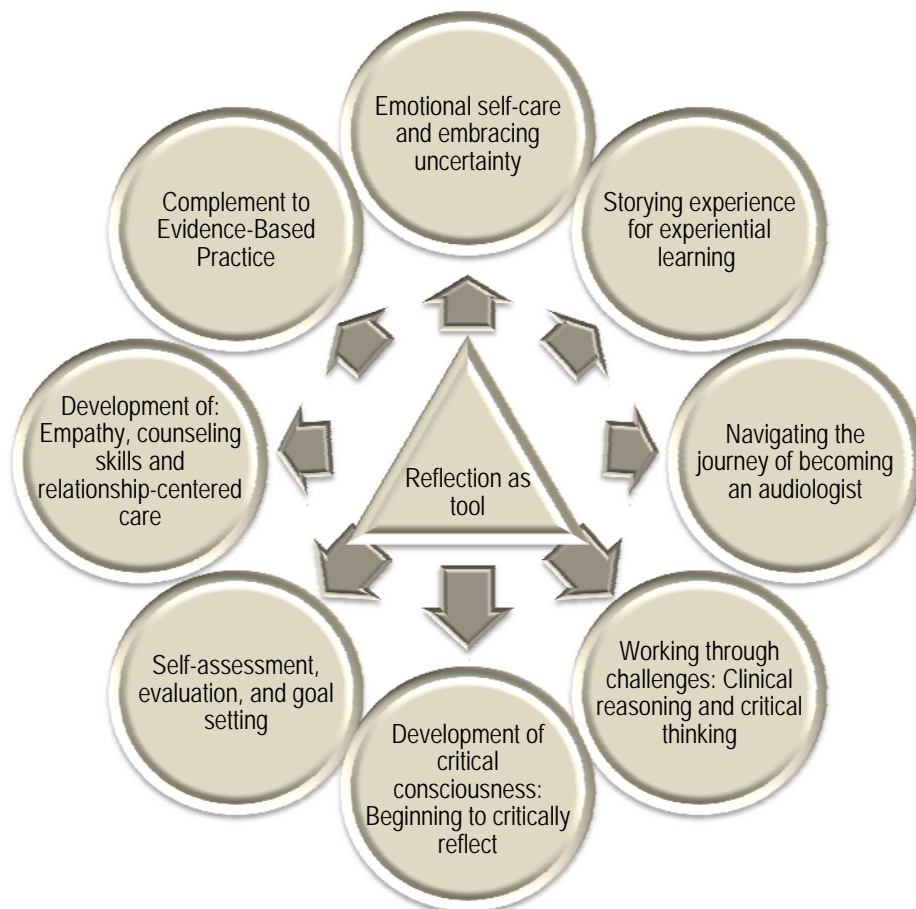


Figure 6: Properties of the facet *reflection as a tool for growth*

4.4.1 Emotional self-care and embracing uncertainty

Most students use reflection as a tool for emotional self-care. Emotions that students reflect upon span a spectrum from excitement and pride to anxiety and frustration, from fear and insecurity to comfort and confidence. At times, students grapple with contrasting emotions simultaneously, such as a stressed and anxious sense of uncertainty and an excited anticipation for what is to come.

Students both explicitly and implicitly discuss emotional self-care. Naturally, in implicit cases, my interpretation of how they were using reflection was a part of the analysis. Analysis of the data suggests the following affordances of reflection toward emotional self-care:

- Working through perturbation
- Acknowledgement of uncertainty, possibly embracing uncertainty
- Dialogue with supervisors to work through emotional experiences
- Outlets/safe spaces
- Resolutions
- Catharsis

The data suggest that reflection serves as a tool through which students work through perturbations and difficult, potentially conflict-laden experiences in a productive manner. As one student stated:

I guess reflection helps you regulate your own emotions and just I think it just um reflection can be different things for different people I think you can uh it helps you get through tough situations you know if you're getting emotional you know, you can reflect a little bit on it ... (1006-2 interview).

Early on, many students demonstrate implicitly that they are unable to outwardly express their fears or insecurities due to the lack of comfort level or existence of power differentials with supervisors. Instead, they are able to turn to reflection to name their insecurities and in this act of acknowledgement they allow themselves to acknowledge and experience doubt, perhaps a form of embracing uncertainty (Spafford, Schryer, Campbell, & Lingard, 2007). For example:

I began my placement feeling extremely anxious and nervous for what was to come. I was fearful that my supervisor would have expectations about my abilities that far exceeded my actual skill level (1015-1).

I had my own fears, fears of how well I was performing on my first real placement, fears that I might mess something up; however, like her [a patient], I did not always show it on the outside (1006-1).

As students become more familiar and comfortable with supervisors, some are able to engage in an interactive reflective process with their supervisors to enable them to work through emotional challenges. This dialogue helps students confront challenges rather than ignore or dismiss them. For example:

My supervisor and I talked about it, so rather than tuck it away and not deal with it or just forget about it and hope it doesn't happen again, the discussion confronted the situation. I was able to talk about it and will be better prepared in the future if it happens again. Other emotional events that occurred were also dealt in a similar manner and I really appreciate the fact that my supervisor embraced the client-audiologist relationship and interactions (1012-2).

In their transition into professional practice, all participating new practitioners continue to use reflective opportunities as outlets, as spaces in which to acknowledge the difficulties involved in transitioning from student clinician to audiologist, and to support themselves in the difficult decisions and unsettled feelings they experience as new practitioners. Now independent of supervisors and apart from their classmates, these new professional practitioners identify emotions such as disappointment and confusion within the challenge of change and transition.

After very agonizing couple of weeks I finally decided to switch companies, I thought it would be the best decision for me. It was probably one of the hardest decisions I had to make to date because the clinicians were great with the other company and I really liked my mentor but I realized that I would never appreciate the managerial style of the company and the way they treated their clinicians (1007-3).

I definitely like my job; however, I feel like it was such a hard transition and I'm not sure if it's supposed to be like that or not because this is my first job and I have nothing to compare it to! (1017-3).

Reflection also offers a place to come to terms with the limitations of our professional role. For example, in this case a participant acknowledges the emotions she experiences when she cannot meet a patient's needs:

The few occasions when I have not been able to meet a patient's needs have been very discouraging... (1004-3).

Emotional self-care is one way students and new practitioners use reflection as a tool on their journey to becoming audiologists. The data suggest that grappling with perturbations, acknowledgement of uncertainty, catharsis, and even resolution of emotional experiences are enabled through reflection in the developmental journey from student to professional practitioner.

This last example demonstrates the self-care of storying an emotionally troubling experience as a new practitioner, which reaches closer to a cathartic resolution through reflection.

Just thought my experience as a new grad would be interesting since a situation like that doesn't happen too often! Hopefully anyways! It was a pretty shitty experience but I definitely feel stronger for it. I am not glad it happened, I wouldn't want it to happen to anyone else but I know that I shouldn't be treated that way and hopefully it made the company realize that the way they are running things should change. Other audiologists that left because they were unhappy too told me I had a lot of courage and I did something that some people are too afraid to do because they have been with the company for so long and are in their comfort zone. But I knew that if I was treated this way from day one I would be treated this way for the rest of the time I worked there. So I am glad I did it (1007-3).

In some, the data suggest that early on, students are able to use reflection to work with emotional perturbations, at times achieving catharsis. Students also use reflection as an outlet for acknowledgement of insecurity and uncertainty. In this way, I extend that reflection enables experiential learning through emotional clinical experiences. Finally, as students become professional practitioners, they engage in reflection to work through emotionally-challenging conflicts that they face at this critical juncture.

4.4.2 Storying experience for experiential learning

Another primary use of reflection by students and new practitioners is as a way to recount an experience, re-consider it, re-affirm decisions, and contemplate actions taken. The opportunity to story experience seems to afford experiential learning through reflection-*on*-action, an important part of the experiential learning cycle (Kolb, 1984). Following this reflection-*on*-action, students are able to think about the future.

In the following example, a student recounts seeing a client who had been previously mistreated. I interpret the following from the quote below. The student's experience involves learning that is reactionary, raw, in the moment. Afterward, while writing about it, the student demonstrates critical reflection (Section 4.4.5) and a strong discontent toward overcharging clients for sub-par services. However, rather than remaining solely at this frustrated emotional level of response, the student goes on to internalize the experience as a rationale for best practices such as verification, and the professional value of honesty.

...So not only does it feel that they were ripped off but they were ripped for much less service than they should have received. They should have received much more service for much less money. This experience was both a good learning one and reinforcer of good practice. The absolute necessity of verifying programs, setting the hearing aids yourself, setting up all accessories (so the patient gets a fair chance to try them during the trial-period), follow-ups to the

fitting and honesty. Charging a patient the maximum dispensing fee and providing sub-par service should really be illegal (1006-1).

Storying experience is chosen to define this property of the reflection as a tool facet, because initially, there were some lengthy descriptive writing pieces that could have been labelled as lower level, shallower reflection. However, as the reflection as a tool facet transpired, these descriptive pieces also came to life as a way for students to recount and represent their experiences through description, and at times to give meaning to them, which could then be externalized and applied for future improved practices. In sum, reflection in the form of storying experience allows students to recount experiences they feel are worth sharing, give meaning to these experiences, externalize this meaning (e.g. “This is what I learned”) and finally to apply their learning to future situations (e.g. “In the future I will...”). Students also acknowledge, through written reflection, the benefit of experiential learning. In this example, a student reflects on the benefits of experiential learning; perhaps reflection also offers a tool for affirmation of learning from experience.

This first external placement really made me realize how it is such an invaluable part of this graduate program. You learn so much more there than you can ever hope to learn or absorb simply through classroom teaching. I have taken so much away with me from placement, especially in regards to how to interact with patients and different counselling techniques that you can pick up from different clinicians. I almost feel like I know how to learn better after finishing my placement. I know what kind of information I want to pick up in class or from the textbook. It gives you a real idea of why you have to go through what you do before you can go out and start practicing (1013-1).

In this study’s context, reflection upon the value of experience for learning and the storying of experience through reflection are common uses of reflection in student/new practitioner development.

4.4.3 Navigating the journey of becoming an audiologist

This property, named “development of professional identity,” was previously discussed in Section 4.3.6 and is discussed as professional socialization in Section 4.6.5. It is a property shared between the facets of reflection as a tool (how students use reflection to navigate their professional identity development) and reflection as a window (a view to audiology students’ development of professional identity) as well as a highly developmental aspect of becoming an audiologist (professional socialization).

4.4.4 Working through challenges: Clinical reasoning and critical thinking

Reflection assists students in working through emotional perturbation, as seen in Section 4.4.1 and it also assists them in working through non-affective challenges, such as time constraints or an unexpected occurrences. One might think that instrumental problem-solving need not be imbued with reflective thought. Yet, reflection plays a role in students’ in-the-moment reasoning (reflection-in-action) or problem-solving, and in making these moments into meaningful learning experiences after-the-fact (reflection-on-action). In the introductory example of VRA (Section 1.2.3.2), this type of reflective process was exemplified. The data support that adaptation of procedures “in the moment” is a crucial element of practice invoking critical thinking and attention to individual client needs. This adaptation requires reflective capacity and is often described in student reflection. Students also reflect on missed opportunities for critical thinking resulting in poor clinical reasoning.

Even early on, (including just after their first external placement), students are able to adapt procedures when necessary and also recognize these adaptations as valuable learning experiences. Students seem to learn from these situations that they need to be vigilant, to take nothing for granted. Students are able to articulate their clinical reasoning and demonstrate critical thinking through their reflection-on-action. For example:

I knew I could have asked my supervisor to take over the situation immediately but I thought it was an opportunity to challenge myself and decided to attempt to handle it on my own before seeking assistance. In order to keep the patient focused and alert, I had to modify the test procedure. I instructed the patient to raise his hand instead of pressing a button when he heard the tones and I presented some tones slightly louder than necessary in between thresholds searches. When I saw that the patient was still having difficulty staying focused on the task, I began to talk to him and ask him questions throughout the testing (e.g. “this one is going to be quieter so make sure you are listening carefully”, “don’t forget to raise your hand when you hear the sounds”). I also performed speech testing in between frequencies and shortened the Hughson-Westlake procedure whenever I felt confident that certain steps were not required to obtain accurate threshold estimations [...] The test procedure modifications that I utilized were not taught in the classroom (1004-1).

The idea of clinical scenarios that require students and new practitioners to work through a problem employing methods “not taught in the classroom” is prevalent in the data as an especially important opportunity and mechanism for learning. Several students suggest that working through such situations allows them to feel they have truly learned, in a meaningful and long-lasting way.

Confronting the time-constraints imposed by the realities of practice is a frequently mentioned challenge early on in students’ clinical development. Yet, although reflection serves as a way of recognizing that working efficiently is an area in need of improvement (self-assessment) and perhaps that systems impose time-constraints (critical reflection), it is not apparent that reflection aids students in working more efficiently. Students name time constraints and efficiency as a challenge and reflect upon how they manage the challenge, but do not explicitly demonstrate the utility of reflection to improve efficiency. Implicitly, I posit that it is possible for reflection to improve efficiency indirectly, if reflection supports learning and development. For example, in the case of students recognizing when they are focusing on their own goals instead of

patient needs, reflection does demonstrate usefulness that may impact efficiency of care.

To reflect on instances of clinical reasoning in which critical thinking could have been employed is to turn that instance into a learning experience. For example, in two separate interviews, a clinical faculty/supervisor and a new practitioner/former student recount the same example when probed for an example of an experience that demonstrated the importance of reflective practice.

The supervisor's version:

... that's a chance to sit and listen, so I said "so what do you hear when you hear that"... then they stopped and they thought for a minute. "He's tired, and he's had enough." So I said "so when should you quit?" and the answer came back so they recognized before we get to that point. The problem they stated though was this: that they got inconsistent models. That they got one model that told them they had to do everything - and nobody's telling them you have to look at the patient. The didactic model, which is necessary in terms of gathering information, they weren't getting the part that says "okay, give the information he can take, give the information that meets the patient's needs" cuz once you hit that stressed out point, which was a 90-year-old man who was actually an ex-physician and very smart and quite comfortable with hearing aids to the extent that he wanted to use them [...]. Give him what he needs, don't give him what you think he needs. Or what you think he should need (2005-3-interview).

The new practitioner's version (reflecting on this experience from when she was a student clinician):

...we kinda beat this poor guy like into a bush...like he was older...and he just by the end of it he was just like "oh like does everyone have this much trouble you know I don't mean to be such a pain" and we just kept going with him like we didn't realize he was being like "I'm exhausted. You need to let me go, this is too

much information." [...our supervisor] was kinda like "okay guys I think you've done enough let's regroup" and he was just kinda like "you know, I know you wanna get um the phone program turned up and fitting to targets properly and add those programs so he can hear in noise and um and get everything perfect and counsel on everything and using the telephone and make sure that's working well and make sure he knows how to use the remote and clean and take care of it and take the batteries out and like sometimes you just need to make sure he can turn the hearing aid on, he knows how to give it a clean, use the batteries, cuz you're gonna see him again in couple weeks. And that was his way of kinda telling you like...this is a bit too much for me like I'm at my limit I've had a bit too much I need to go home and let this digest." But, it was hard after having all those classes where it's like "fit it like this, and make sure he can do this, and talk on the phone, and talk about the listening devices and oh this is an idea too and you really gotta make sure you do this." But for [our supervisor] to just be like take a step back and just you need to listen what they're saying to you. Like they'll let you know how much they can handle [...] you need to accept that and respect that because [...] maybe you'll have to do a couple of follow-up appointments with that person, but that's not a problem and that's gonna be okay, and you as the clinician need to be okay with that so that they can be okay with that as a client (1013-3-interview).

This example demonstrates this property of the reflection as a tool facet in several ways. In the moment, the clinical supervisor recognizes that the client was exhausted, but the students continue to adhere strictly to their preconceived model, or notions of a comprehensive appointment. The recognition of this example as one that required reflective capacity by both supervisor and student and their continued thinking about the example many months after it occurred, demonstrate the potential for both reflection-in-action and reflection-on-action to support critical thinking and clinical reasoning. I extend that reflection -in and -on-action act as tools to improve clinical reasoning and critical thinking, thus potentially improving practice and patient/client care.

4.4.5 Development of critical consciousness: Beginning to critically reflect

Relating to the process of overall development from student to practitioner, critical reflection and critical consciousness do not become clear concepts until Time-points 2 and 3. I posit that this later development is due to the earlier focus on the self as opposed to the client (early egocentricity, Section 4.6.2). From the data, four processes identified as triggers of critical consciousness (Kumagai & Lypson, 2009) include:

- Systemic constraints
- Broadened perspectives: Beyond comfort
- Ethical dilemmas
- Uncovering assumptions and the taken-for-granted

One common source of tension that inspires critical reflection is the area of hearing instrument dispensing. In this role, students and new audiologists wonder about their role and place relative to other professionals, such as hearing instrument dispensers and specialists (college-trained professionals in hearing healthcare who have related but narrower scopes of practice). In the following example, a student faces the combination of systemic constraints and questioning of roles and professional responsibilities:

yeah what used to happen was the dispensers would literally do everything - they would set the hearing aids, I don't know if they would verify it but they would set the hearing aids, and fit it to the patient and made sure they hopefully knew how to work it but then they found there was just at the follow ups there was a lot of problems like a ton of problems. So, they decided that the audiologist would pre-set them in the test box, ... the best they could with open fits which isn't ideal but ... you know ... and they I think they knew that but they were trying their best and the structure of the business, the structure of this place was limiting them and I they're trying their best I know they were cuz when I was there, they did a good job like [...] they are you know they know there's problems with the system they

have but they they almost feel like they have to work within it they can't really step outside of that boundary and the boss is going to get mad (1006-2 interview)

Students and new practitioners also reflect on whether or not there is a conflict between dispensing an expensive device and providing client-centered care. Students and new practitioners express concerns about the impact of business models on the profession and client care. I suggest it is important and encouraging that students and new practitioners recognize this area of audiology as potentially problematic – that they are questioning the status quo:

I think the field of audiology has changed a lot of the past few years. Although I did not know what it was like before since I am just a new grad, these larger companies seem like they are about expanding now, trying to get the market place and largest profits without thinking about what might happen in the future when the baby boomers are gone. I also think the fact that these companies being owned by hearing aid manufacturers also makes the profession more focused on sales than patient care. Unfortunately I don't think it will change any time soon (1007-3).

In the current climate of audiology practice in Canada, new practitioners such as the one above are often left with few job options other than those that require working for “larger companies” that may prioritize sales over care. Reflection offers a mechanism by which students may develop awareness or consciousness of systemic constraints or oppression.

Students' and new practitioners' critical consciousness flourishes when pushed beyond their comfort zones, as they experience previously unknown realities. Students in this study describe two such opportunities: a humanitarian project in Peru, and a trip to provide services in Northern Ontario. These types of opportunities spark new insights, and broaden perspective thus enhancing critical consciousness, as demonstrated below:

While in Peru on a humanitarian audiology-related project with some of my classmates I thought more about the individualistic nature we are often socialized into as students and members of Canadian society. I was struck by the communal and collective virtues of Latin American culture. There are pros and cons to both. Our regulations and stringency in Canada keep us organized and efficient, but the focus on forging humanistic connections with clients made the audiology practice that I observed in Peru a bit more heartfelt. The experiences I have had in Peru have really made me think about what kind of clinician I want to be and what kind of contribution I want to make through my profession [...] There also must be a balance between caring about your personal goals and what you want to achieve and then truly caring for your clients and thinking about the greater good that you may contribute to because you have chosen a helping profession (1008-2).

...My time in Peru has had a profound impact on me and how I view others and the world in general [...]I actively reflected daily during my 23 day stay in the country (I journaled for many days as well) and again, the reflection has helped me gather my thoughts and feelings and process them in an effective way. The whole experience has allowed me to provide better patient care by better understanding the human connection and that is something I can bring back with me to the clinic in Canada (1012-2).

Based on examples like these, broadened perspectives may help students and new practitioners develop alternate theories to complement or call into question their existing theories. In the cases of systemic and cultural issues, these alternate theories may be difficult to acquire without the experiences that present opportunities for new perspectives. Similarly, ethical and value-laden situations may require or inspire critical consciousness.

Some students and new practitioners also concern themselves with ethical issues. For example:

Moreover, it was important for me to realize that making a decision based on my own ethical beliefs may result in upsetting or losing a patient but will ensure that I meet the high standard of practice an audiologist should strive to meet (1004-2).

In this next example, a student takes the perspective of what is fair, just, or right. The student considers sub-optimal hearing aid fitting as an unfair or unjust service to patients/clients.

[...]and that's you know, if you've never worn hearing aids before and this is your first month ever wearing a hearing aid you're thinking this thing isn't even doing anything and they're expensive! You know and if they're not doing much for you then your opinion's gonna be totally thrown off what this hearing aid's all about (1006-2 interview).

This area of critical consciousness could be of great importance in audiology given the personal expense involved in many of the treatments prescribed. Even early in their careers, students and new practitioners grapple with ethical issues inherent in their profession. Reflection serves as one way in which students may consider ethics.

Critical consciousness is also developed when students use reflection to question what they assume to be true and to probe deeper than what a client may attempt to portray at first.

At first, I took their answers at face value and believed that everything was great. However, after making adjustments or looking at the hearing aids on the computer, we would realize that they had constantly been having to adjust the volume or not wearing them very much. We would then go back and talk with the client and realize that everything was not as great as they made it sound (1010-2)

The above example implicitly represents the power relationship between clinician and client. Several students note that clients will often tell professionals what they believe is the desired response. When students and new practitioners

realize that they are in a position of power, they are then able to be conscious of the depth of their responsibility to the client. For example:

One other thing I've noticed is that people seem to put a lot of trust in professionals like myself. I've had people tell me many personal, intimate things about their lives. I've also had people follow every word I've said, because I'm the professional. That tells me that we have an enormous responsibility to our clients (1010-3).

Students and new practitioners reflect on tensions as they encounter situations that arise as conflicts between personal values and realities of practice. Critical reflection can help students work through these conflicts but, I suggest, critical consciousness (Kumagai & Lypson, 2009) must develop to enable students to attend to conflicts beyond one's immediate situation or beneath the surface. Recall the student who reflected on how an improper hearing aid fitting is more than an issue of doing a clinical procedure according to protocol, but rather an issue of what is fair or just to the client. This example demonstrates critical consciousness. The student attends to the underlying responsibility to do justice for the patient/client (providing eudaimonia) and sees the implications of failing to follow best practices on more than one's professional credence.

As can be seen from the examples above, critical consciousness is awakened in students when they are faced with situations that demonstrate injustice or systemic shortcomings (a patient/client paying for an expensive device that does not work optimally, or a dysfunctional workplace setting or system), a world beyond their own comfort zone (students in humanitarian efforts), a disconnect between what was assumed and what is real and important to the client, and a realization of one's own power.

Critical consciousness may facilitate critical reflection and/or critical reflection may help develop critical consciousness. In either case, based on the processes demonstrated through students' reflections, I extend that reflection plays a role in the recognition and acknowledgement of systemic constraints (oppression), other

perspectives (including cultural differences), ethical dilemmas, and one's own assumptions.

4.4.6 Self-assessment, evaluation, and goal-setting

Self-assessment is aided by guided reflection because students are asked to review what they did, question it, and think about ways to improve. Evaluation is enabled by reflection because students reflect not only on their own performance but also on the performance of their supervisors. Supervisors also use student reflection as a tool for evaluation of student development. Finally, students often resolve to improve, setting specific goals, based on their self-assessments and evaluations of others.

Students reflect upon experiences that they deem learning opportunities, assess their own performance, and set goals for improvement for future practice. For example:

After that day, I really tried to be more present and less distracted when dealing with all patients, even when I was very rushed (1002-1).

In addition to being efficient between patient appointments, I still think I have a long way to go to be more efficient during patient appointments. This is also difficult for me because I do not want the patient to feel rushed. As an audiologist, I must deal with technical issues such as testing and setting hearing aids as well as emotional and educational issues that arise in counselling. I am trying my best to improve my efficiency in the 'technical' tasks I perform without sacrificing the time I spend listening to my patients and counselling them about hearing aids and hearing loss (1004-3).

At times, this self-assessment and goal-setting can take shape through consultation with a supervisor or more experienced practitioner.

I didn't feel very confident in some of my abilities (i.e. interpreting reflex patterns) and I recognized this, so I sat down and talked with my supervisor (1012-2).

Beyond self-assessment, students also evaluate their supervisors' performance in order to learn through observation.

My supervisor stepped in and with some effort was able to obtain consistent results within ten minutes. I watched my supervisor closely during this time and realized that my supervisor's ability to obtain results was related to three fundamental things: total comfort with and savvy handling of testing equipment, understanding and insight into the client's thoughts and feelings, and the ability to adapt a clinical approach according to the needs of the situation (1008-2).

Conversely, supervisors are able to evaluate students' performance by reading student reflections.

... what I found it was really really helpful for me was when I went back at the end of term [...] I found it extremely helpful to have not only this sort of record of what they have done... so by using that statement "what did you do today" [...] I could look back and say oh this student I had over the course of the term everything that they had engaged in or that they recalled engaging in um and even in the final evaluation... I would sit down to talk about those things, sometimes it was then that we went back to points that they had made in their reflection as well and said well you know I could see a progression here and you know this person you talked about it this way and here you talked about it that way so although I wasn't necessarily talking to them at the time about it ultimately I found it really useful for how I gave feedback ... at the end of term so as evaluation tool it also was helping me I think to give them better feedback [...] and it wasn't something that I had anticipated ... but just something that I realized...(2002 interview).

In sum, reflection offers a mechanism for self-assessment, evaluation of others, and goal setting. When asked to specifically set goals related to professional behaviours, students tend to compare themselves to ideals of practice or espoused theories gained in school. I posit that comparing oneself to these standards serves as a reminder of sorts; the goal-setting process serves as a

formal way of reviewing professional ideals and reinforcing that one should always be striving to improve. Although this study essentially enabled this process to occur and the process is theorized here, the actual impact on professional growth that may result from engaging in this process is not known.

Overall, this property explains how reflection serves as a developmental tool of self-assessment, evaluation of others' performance, and goal-setting, in this study's context.

4.4.7 Development of skills

Empathy, counselling, and relationship-centered care (discussed in Section 4.6.2) are three behaviours for audiologists to demonstrate for which reflection seems to play a role in development. These behaviours are common topics for reflection, which suggests that they may be further developed through reflection. For example:

I found that if you showed the client your genuine concern for their well-being that they would be more willing to open up to you [...] Once this caring relationship was established with them, all subsequent interactions would go much more smoothly (1015-1)

Audiologic counselling develops through experience even more so than assessment techniques, according to participants in this study. Note that in this context, counselling refers to the explanation of results, etiology, implications and education about treatment or (re)habilitation options. Counselling is a skill that involves attention to the individual needs in the moment and of the client. It could be argued that counselling is inherently more difficult to teach through classroom lessons for these reasons, as one participant notes:

As with a lot of counselling aspects, it seems like something that you can't be taught by reading a textbook or listening to a lecture, it is more of learning through a combination of experiences that will perfect the skill (1007-2).

Perhaps for these reasons, counselling is a very common area of practice implicated by students in terms of when reflection is helpful and necessary, even in terms of frequency of the type of experiences reflected upon. Supervisors also closely tie counselling to reflection and reflective practice, citing the tacit, experiential, client-centered nature of developing competence and expertise in counselling. The indeterminate zones presented by counselling pose reflective opportunities. For example, the following quotation comes from a supervisor who feels that counselling is an aspect of practice that students feel more uncertain about:

...then I think students always feel that they have greater difficulty sort of stepping into the counselling roles because I think they feel that they don't have enough knowledge and what happens if they ask a question that I can't answer (2002-2-interview).

The next two examples demonstrate students' use of reflection to learn from a supervisor the importance of some essential counselling approaches including being attentive and sensitive to the client's unique needs.

She reiterated that since they found the hearing loss early and would get him hearing aids he would likely develop age-appropriate language skills before he went to school. I was surprised by how often she relayed this point.[...] I understood why near the end of the appointment when the mother asked the audiologist if her son was completely deaf or if he would learn how to speak. [...] This showed me that the news was so overwhelming for the mother that even though it seemed like she was following and understanding what the audiologist was saying that she really wasn't. The news was just so upsetting that she could really only focus on the fact that her son had a hearing loss (1005-2).

I wanted to tell the client what I knew about Amikacin and about the nature of the hearing loss which I understood a bit better than I think my supervisor did because I had just taken a course about it in school. However, I held back and let my supervisor take initiative in this regard. I now realize that the information I

wished to provide would have been futile and more stressful for the patient at that point in time, so I am glad I did not say anything (1008-1).

A supervisor's perspective on the usefulness of reflection in improving counselling follows:

I think the Aural Rehab [AR] group stuff has allowed us to see it from a very different point of view um and to reflect again so I can think of people that are my patients that have then been part of an AR group with and I've thought about what happened in the interaction, and I think I've given them what they need, and I've maybe have felt good about that and then I listen to them ... in those groups and I hear things that I'm very surprised by sometimes ... um and so then there's a deeper level of reflection cuz oh I thought I had done a really good job of explaining this to them I thought they really understood this and that they're sitting sharing with a group that they don't know something (2002-2-interview).

The supervisor, in the example above, runs AR groups with individuals who have hearing loss. Reflection and the relational element of the AR groups interact to help her see differently as she notes that she is "very surprised" by what she hears sometimes when she observes her patients "sharing with a group that they don't know something."

In sum, reflection is a potentially useful tool toward developing the professional behaviours and skills of empathy, counselling, and relationship-centered practice.

4.4.8 Complement to evidence-based practice

The theory of EBP involves attending not only to research evidence, but also employing clinician expertise to best serve a client's individual needs (Dollaghan, 2007). Little is written about the latter two aspects of EBP. Reflective practice may serve purposes in supporting and complementing EBP. First, it may raise a clinician's attention to the need to look to the research evidence. Second, it assists the clinician in incorporating evidence into their practice. Many students reflect upon their use of reflection to monitor a need to look to the research

literature as well as use reflection to identify situations in which EBP is being neglected. One participant, a clinical supervisor, provides a practical example:

... what is a good audiologist?... there's a lot of components there, um, if you're a good audiologist, then, and this'll kinda go back to the whole EBP thing, which you know, I think there is some connection to reflective practice, if you're a good audiologist, you'll be able to, you know, you'll, let's say you're an audiologist, you don't verify your instruments, you see a person coming back for all these follow-ups you know, you're making tweaks and adjustments and nothing is happening [...] uhhh and then you go back you reflect on what you've done, you reflect on the practice that is occurring and I know this is a very separate way of reflecting on it, but I guess it's another way of reflecting, um you know you go out to the literature, as far as, you know, why verification's important and the number of follow-ups that are reduced by verification, and patient satisfaction, um and then you start implementing it in your practice and therefore you become a better audiologist. So...the only way we can create good audiologists, I think is to have them be able to do reflective practice, or hopefully to keep them good, you know what I'm saying? (2001-1-interview).

Although EBP and reflective practice primarily draw from distinct knowledge sources, they are not viewed as incompatible by students, new practitioners or clinical supervisors. Rather, a mix of EBP and reflection, which I will refer to as evidence-informed, reflective practice, seems congruent with espoused values of practice.

4.5 Facet 3: Reflection as developing behaviour

Reflection develops somewhat “naturally” as students become professional practitioners and as they embark on professional practice. The organic nature of this development is exemplified in express desires to maintain the practice-generated, practice-based, non-regulated nature of reflective practice. Yet, many participants express that early exposure to and fostering of reflective practice is valuable in helping them attend to reflective possibilities. Like any developmental

process, there is a unique trajectory for development (Section 4.3.4), and while some individuals may develop easily and well, others may struggle and may stagnate if nothing or no one intervenes. Development is an especially common topic among students and supervisors. For example, in the quotation below the student is reflecting on how reflection impacts development as a practitioner:

so...um, I found myself remembering things easier, like oh yeah I did do that, I guess cuz the more I thought of what I did throughout the day, like each day, the more...I guess it was leading me to reflect more (1012-1 interview).

Figure 7 summarizes the four properties of this facet: critical incidents, writing, faculty inspiring and fostering, and value and place for reflection. These four properties make up the facet representing the process of how reflection develops as a behaviour in audiology students. Figure 7 shows each property of the facet of reflection as a developing behaviour as a piece of a “pie,” because each property contributes to part of the developmental nature of student/new practitioner reflection. The arrows on the perimeter of the pie indicate the non-static nature of each piece of the pie, with each property a part of the developmental journey on which students embark.

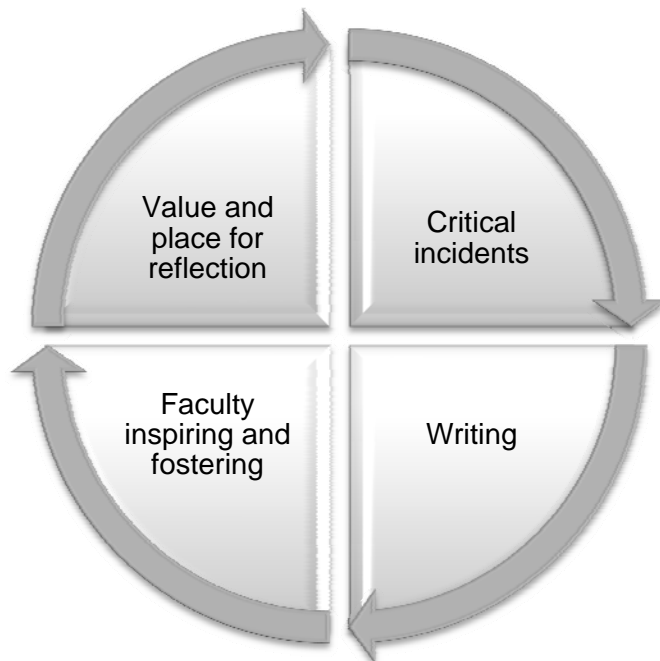


Figure 7: Properties of the facet *reflection as a developing behaviour*

4.5.1 Reflection sparked by critical incidents

Critical incidents are often starting points for reflection, requiring identification of an experience that could serve as a meaningful source of learning, and making explicit the learning that results. From this learning, students may set goals for improvement. A pattern in the data is that reflection on critical incidents aligns with the cycle of experiential learning.

In this first example, a student reflects on how the stress of a busy schedule manifested in her lack of presence with a patient:

I thought about that patient a lot after that. It was one of those situations that made me realize that I have to make a concerted effort to be more attentive to patients when they come in. There wasn't much I could do about being behind with patients because the ones sent down by the ENTs need to be attended to. However, I think that I need to work on better dealing with that overwhelmed feeling so that it doesn't take away from my attentiveness to patients that I see. Assuming things about patients before you see them is also not the best idea

because I think that also had something to do with me overlooking individual differences and not truly looking at the patient as an individual when I first saw her. After that day, I really tried to be more present and less distracted when dealing with all patients, even when I was very rushed (1002-1).

Critical incidents may also serve as starting points for goal-setting, as illustrated in the example above, and as a place for self-evaluation, as in the example below:

The incident also showed me that I have a lot to learn about hearing aids, how to pick them, how to fit them, and how to counsel. I think the experience of this particular clinical incident will affect my future practice because it has given me a lot to reflect on and I can use it as a benchmark against which to compare when I encounter similar instances in the future (1008-1).

Deliberate reflection upon critical incidents may lead to additional reflection on areas of practice that students or new practitioners may not otherwise realize they need to resolve. According to many participants, critical incident-sparked reflection is often well suited to written reflection, although instances of dialogue with supervisors regarding an incident are also common. Reflection upon critical incidents was elicited in this study. This deliberate use of critical incidents poses a challenge in terms of understanding whether critical incidents alone, without imposed reflective activity, would be as meaningful for learning as they were in this study.

4.5.2 Reflection developed through writing

Reflection through writing is not identical to reflection in the absence of writing. Students and supervisors discuss the benefits of writing in addition to other forms of reflective practice. Writing is seen as beneficial to the development of reflection by the participating students in this study. Although it can be viewed as a chore initially, once students attempt reflective writing, they do not find it overly onerous.

Not all students reflect well through writing, and supervisors understand this point, while acknowledging that the act of writing reflectively is in itself unique and distinct from other forms of reflective activity and thought. The example below is from a supervisor, reflecting on how reflective writing may be a guide or helpful process or approach:

... maybe this process sort of guides what can we do with those ... and so even if you do have those thoughts what do you do with all that information and is it helpful to write it down so even learning to journal or to write it down is that a helpful process to me - am I that person who can work through it by writing it down or am I not, is that not the approach for me (2002-2 interview).

Many students acknowledge that writing is useful and different than reflective thinking without an output. Writing can help organize reflective thought, provide a record of it for future further reflection, and can even trigger different reflection than one might engage in without writing. One student notes that written reflection helps you “do it in your head” later on (example shared later in this section). The two quotes below are to separate examples of students reflections on the usefulness of reflective writing:

ummm no it is helpful to get it on paper, and it kinda gets you thinking not just a big cloud of thoughts ... and helps you organ organize it into a sequence of events ... (1006-2 interview).

yeah I just find the writing process helps a lot for me instead of just sitting and thinking about it I actually do like to write it down um you know how things went how things didn't go (1010-2 interview).

Although the initial motivation to write may not be a natural tendency, once they begin, some students do find that reflective writing occurs quite easily and naturally (although the submissions suggest that the depth and critical nature of writing is not something that students achieve uniformly without guidance). As mentioned, students may at first find reflective writing to be a chore of sorts, and

may not look forward to it. However, for some students, it does become an enjoyable activity that they perceive to be worthwhile.

I remember kinda being at first okay I have to do this reflection it kinda did seem like a chore, I think a lot of that is I wasn't sure you know, the situations to pick so I had to actually think back to the people I saw and kinda pick somebody so that kinda seemed a bit of a task at first trying to do that, but I found when I actually started writing the reflection it went much easier than I actually figured it would. It just kinda started coming out when I started thinking about that person, what we had done, so... (1010-1 interview).

[Researcher]: some people are more comfortable doing things like this in writing and others will talk more than they can write. [1012]: right, and I'm the opposite ... so I would write and I can think easier when I'm writing than talking...so again like, yeah. I think writing my thoughts is easier and especially emotional things, it's way easier to write than to talk about it. For me, anyway. (1012-1 interview).

Students and faculty also seem to subscribe to the benefits of written reflection, although the time and motivation to make time are perceived barriers to regularly engaging in written reflection. Writing, though most often used by students to reflect *on* action, also provides a mechanism through which reflective thought could begin to emerge more naturally in the form of reflection-in-action. This form of reflection is seen to demand less time and is thus more likely to be incorporated in future practice.

[Researcher]: Realistically thinking ahead, do you think you would take the time at the end of the day to do a written reflection? Or... [1012]: Well, I did it [Researcher]: you did it, yeah! [1012]: in the summer so ... I think it it...could be done, it's like...people journal, right? It would be the same thing, but for your professional your job. That being said, yeah, I dunno if you'd actually do it, but ... I don't see it as like a completely long-term thing. You would do it to get in the habit, and then you would just do it in your head, I think. (1012-1 interview).

There are times that reflective writing enables, encourages, or leads a student or practitioner to reflect on topics they did not set out to explore. In this way, reflective writing takes on a learning process of its own and can promote consideration of an alternate perspective.

ummm I think it uh kinda reflecting on like what his thoughts might have been helped me like at the time I wasn't thinking about that at all but then ... writing it kind of helped me um I guess like understand his point of view maybe a little bit better? (1007-2 interview).

Interestingly, a few students plan to continue to write reflectively throughout their careers. For example:

I actively reflected daily during my 23 day stay in the country (I journaled for many days as well) and again, the reflection has helped me gather my thoughts and feelings and process them in an effective way. The whole experience has allowed me to provide better patient care by better understanding the human connection and that is something I can bring back with me to the clinic in Canada.[...]I think that overall the act of reflecting has really helped me personally and professionally. It's become much more automatic now but still just as important as always, just more efficient I guess. I'm glad I got to write about my experiences because writing things down is something that works well for me and gets me thinking. I'm not overly verbal with my feelings and thoughts so by writing I'm able to express myself more and having an audience is a great help too. I'm definitely going to continue what I learned from you in the future and I think that active reflection will continue to serve me well! (1012-2).

Reiterating from Chapter 1, reflection can occur in-action (in the moment) or on-action (following an experience). This processual property of the developing behaviour facet shows that reflection-on-action can take place and perhaps develop through writing. When writing leads to unexpected or unplanned thinking, it may involve reflection-in-action. Some students and new practitioners enjoy and find benefit in writing as a way to process experiences transforming

them into meaningful learning experiences. This property suggests that elicited, guided, reflective writing may help students develop as reflective practitioners.

4.5.3 Faculty inspiring and fostering reflection

Many students and faculty alike suggest that reflection can be fostered, its value demonstrated and learned, but that the majority of this reflective education takes place in a non-explicit way. Yet, despite this non-explicit teaching/learning, students do recognize that some explicit introduction to the notion of reflection is important upfront in order for an awareness to be raised. Specific teaching/supervision/mentorship styles seem to matter to students. Dialogue, feedback, implicit modeling, and explicit demonstration seem to be ways in which faculty inspire and foster reflection in students.

When asked about faculty and supervisor inspiration or fostering of reflection, students are able to identify both individuals and strategies that either encourage or do not encourage reflective processes. For example:

... there's a couple I can kinda think of right now. I mostly felt they kinda helped that they themselves demonstrated that they do reflection, um, just you know, they've mentioned things like in lectures or things like that that um they have reflected on and taken that information and improved or changed the way they've done things so I kinda like a motivation for me to kinda realize okay they are reflecting as well, it's working for them, it's good for them, to kinda incorporate that into myself then (1010-1 interview).

Some students and faculty, though they acknowledge the tacit nature of reflection, also feel it is important that reflective practice be an explicitly acknowledged aspect of the audiology education program rather than a taken-for-granted aspect that is not explicitly discussed. For example:

so yeah no I don't think it's being promoted a lot outside of this [study]..., [Researcher: do you think that it needs to be?] um I think it's an important part of

practice and as students as well going into practice shortly yeah I definitely think there should be a focus on that as well (1010-1 interview).

Some students feel that certain teaching styles either encourage or enable reflective activity, or do not encourage or enable reflective activity.

[Researcher (R)]: so have you felt encouraged, supported, fostered...by any particular...[Participant (P)]: well, yeah I think so like in different assignments and stuff like uhh...like uh take home test we did was sort of make our own case, and have interventions and stuff, so I think you can use your own experiences with that, so like...they and they sort of wanted you to do that, to make it like a real case, and ... I think that by providing that, they sort of implicitly [...] [P]: sorta said well you can reflect [R]: yeah, so by the types of teaching approaches that they're using, or evaluation approaches that they're using ?...[P]: yeah..[R]: they can kinda either foster or not foster reflection in your learning? [P]: yeah, yeah...so I think it was like um like a takehome essay, it was very um..you're easily able to reflect as opposed to a multiple choice [...] it has been helpful in that way (1012-1 interview).

yeah the first placement even the second placement my final one the supervisor I had really encouraged that too. [...] She didn't really encourage writing, but you could tell just working with her that she really encouraged reflection, you know, made me, asked me questions like, "Why are you doing that," you know just to get me thinking um so it wasn't just going through the motions all the time of doing the same thing with every person. Um so she was really good that way, actually why are you doing what you're doing you know actually thinking about it more. So yeah, she really encouraged that [...] not so much the writing, [...] I just carried that on myself cuz I like it, but yeah she did encourage the reflection (1010-2 interview).

Dialogic reflection is enabled when supervisors engage in discussion or conversation with students about problems of practice.

This helped me a lot by allowing me to tackle problems early on and keep engaged in the whole reflective process. Being able to talk about things that I noticed (or 'reflected' on) made me more likely to keep thinking about things and to be more aware of my performance (1012-2).

Sometimes, supervisors foster reflection through [writing] whereas discussion might be a better way for them so if that's the student who comes knocking on your door at the end of the day and says I just have a couple of questions and you always end up in some type of discussion which is basically a reflective activity [...] Um they just couldn't resolve it all in their own mind and they needed that moment, but they're maybe not the student who's gonna write it all down for you and feel if they've written it down in the format that I'm asking that they've resolved anything [...] (2002-interview).

Professors and supervisors inspire reflection based on implicit modeling and explicit demonstration of values for reflective processes through their teaching and mentoring approaches. Both students and supervisors feel that there is a faculty role in the inspiring and fostering of reflection. I contend that the explicit introduction (as noted by several students) to reflection is important and is a strategy to be taken seriously. Yet, I contend that it is the implicit, perhaps embodied, modeling of reflective processes that inculcate the importance of reflection in students.

4.5.4 Valuing and finding a place for reflection

Researcher Reflexivity: Value for reflection is a behaviour that may arguably have been influenced by the imposition of this study on students' educational experience. Further, workshops and communications with participants likely directly impacted the developed theory in terms of student/new practitioner value for reflection. In fact, some students directly acknowledge the research's impact on their learning:

Oh I think I think it is important I think like what we've been exposed to in your research has been important for you know, in that it got me thinking about certain things in different ways (1006-2 interview).

Evidence for student values for reflection and implications for the place of reflection in audiology include:

1. Identification of reflection as an important curricular piece
2. Importance of reflection to lifelong learning
3. Role of reflection in professional development

Some students feel that reflection is so important, that it should be a part of the curriculum.

I think that ... uhhh.... Putting into like a class or something, and just being uh...aware of it...the earlier the better (1012-1 interview).

I think the way we've done it has been HAS been good, I just, if it's incorporated into the curriculum it's probably even better than just you know I dunno not too many people opted out, but you have to do it and then maybe people will put just that much more into it, having it, it's a bit of an incentive you have to do it as a mark...(1006-2).

As students transition toward professional practice, they may begin to recognize the value of lifelong learning (Section 4.6.1) and the role of ongoing reflective practice in this learning.

It is a challenging, however necessary, exercise to reflect on what I have learned and to think about what my strengths and weaknesses are as I enter the workforce as an aspiring professional (1008-2).

Sometimes you can see this "something" as the difference between a person who can get results from a difficult client in ten minutes versus a person who cannot deal with that situation. Some of it has to do with inexperience and

unfamiliarity. But, some of these things just cannot be taught. It takes time, experience, and life-long reflection (1008-2).

I do think that this whole thing was very beneficial and I think that it's a great thing to teach students. Not only does it help in your vocational or professional life but it can also be applied to your daily life. I'm glad I got to be a part of it (1012-2).

Reflection offers students and practitioners a way to continually improve practice and grow as professionals, and many value this opportunity.

Well I think it is important, and I think it definitely plays a role in helping you keep moving forward, you're not just staying in the same spot doing the same thing all the time (1010-1 interview).

Supervisors also see reflection as important for these reasons. For example, this supervisor states:

I think what it offers them is a way ... like as clinicians we must reflect or we do reflect all through our careers ... so if we can develop that skill as students um I think what it offers us is is um the opportunity to become clinicians that um care about and provide the kind of service that we hope our students will provide to clients because that's how we grow. For me that's how you continue to grow and you know I think students see their education process as a sort of time-limited and once I'm done I don't have to do all that stuff anymore, and yet it's so much a part of what we do and every interaction that we engage in as a clinician we're taking a moment at some point I think and sort of saying you know how did that go ... (2002-interview).

... I think that's where the go back to the reflection which is just that it's a fundamental part of what we do ... um and so starting to think about it while you're in that student phase um is really important (2002-interview).

This property demonstrates that there is a place for reflection in audiology, that students and supervisors feel reflection should be a legitimate part of the curriculum and that it plays a role in lifelong learning and professional development.

4.6 Underlying process: Development from student clinician to professional practitioner (Evolving practitioner)

A central process is theorized within the three interfacing facets that form the theory of the role of reflection in audiology students' development as professional practitioners: the window that elicited reflection offers to the guides of students, the usefulness of reflection to student development, and the development of reflection as a professional behaviour. The central process through which reflection was studied is the development of students as professional practitioners, as revealed through elicited reflection. Some of the properties of this central process have already been discussed because they are so interwoven with the facets of reflection. Figure 8 depicts the developmental properties of the journey of the evolving practitioner. Each segment of the figure is shown moving from left to right, from early development to later development. The explication of these theoretical properties follows this same developmental timeline, with concepts and exemplars moving from earlier to later within each processual property. Data were analyzed in this way for this central process/facet.

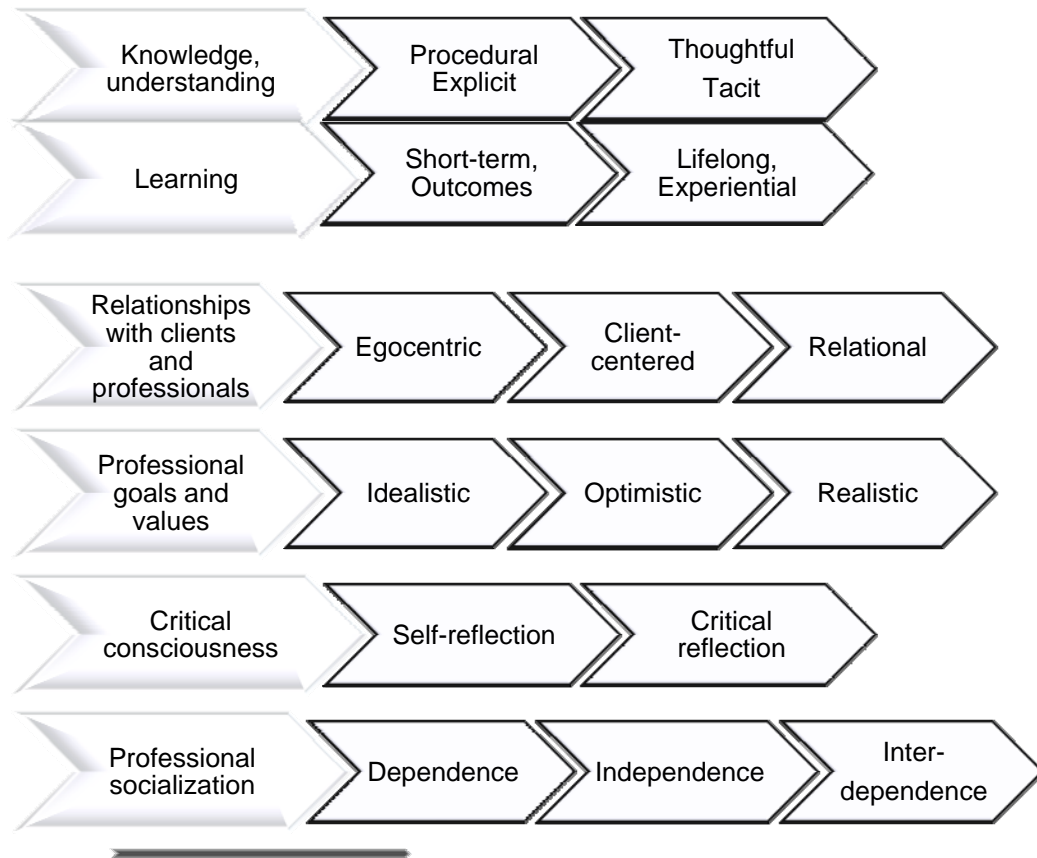


Figure 8: Properties of the development from student to professional practitioner (evolving practitioner)

4.6.1 Knowledge, understanding, and learning

From procedural and explicit to thoughtful and tacit, short-term and outcome-focused to lifelong and experiential.

Students' notions of knowledge move from a very procedural, step-by-step type of thinking and knowing, toward a more embodied, tacit knowing.

it's that old like that old saying like practice makes it perfect..you know, but maybe perfect is not the right word, but I think...when you are forced to and in this particular job setting I was FORCED to um..just start doing audiograms one after the other, and whether I liked it or not, I had to do them and I had to do them properly and I had to understand, [...] I said to her, well I have my textbooks I learned the formulas for masking so...I'll look over those and and you

know see if I can follow the formula and she just looks at me and she says "I never..want students or new you know new people who come to work here to follow formulas, the only way you're ever going to know how to mask properly is if you understand what you're doing when you're masking. like why do you have to mask Word Recognition Scores, like what's going on, and how do you know that that's the level that you have to put in to the left or right ear to mask right? so I just thought wow that's a good point like..huh...do I really understand this like do I really understand? I know why I have to mask, I know when I have to mask, but do I REALLY understand, like what I'm doing? No..obviously I don't because I'm going to be you know um I'm gonna rely on a formula. That was my first inclination, was to go look up the formulas in my textbook...so um...then what took me there, okay, I was forced to do it. [...] I made tons of [...]So the first two weeks I felt like a complete nim-kum-poop - you know on every single audiogram there was something, you know ... but then as I kept like I kept doing them, so instead of and I remember thinking to myself like okay I can go in two directions - like emotionally with this - either I could go in the direction of thinking oh my god, school taught me nothing and I'm like a terrible audiologist because I don't even know how to put together this audiogram, I don't know how to do this, I don't know how to test, or I could say you know okay I'm making a lot of mistakes but I'm just gonna keep trying and I'm gonna learn, [...] I've now reached a point where I know ..huh..yeah I'm not thinking about what button I have to push, or whether I'm saying things correctly, or whether somebody's watching me and and sort of um rating my performance or or I'm not worried about that anymore... it doesn't matter to me anymore, I just what matters to me is like, this person in front of me [...] (1008-3 interview).

In the example above, this new practitioner is “forced” to learn something at a different level than she had previously known it (with the previous level a matter of following steps). This practitioner needed to know, *understand*, and feel confident in the procedure, when and why she would use it, and how to perform it. She articulates how she reached that level of knowing through practice, experience, and active learning.

When students become practitioners, they need to rely less on others (formerly supervisors) to serve as a safety net. This independence also “forces” deeper learning. However, as the student indicates, the opportunity must be seen and embraced as a learning opportunity in order for it to become a meaningful learning experience. Some students may reach an appreciation for lifelong learning as they become practitioners, including the student who states:

As much as we learn in school, I don't think it can ever fully prepare us for work as an audiologist, but it gives us the basics. From there we have to learn to be adaptable to deal with situations that don't follow textbook cases, which rarely end up coming along (1002-2).

The transition moves from a discourse of “knowing enough” with knowing referring to explicit, procedural knowledge in early development to one of acceptance that one will never know everything and that some knowledge is tacit. Early on, many students have a greater sense of finality to their professional knowledge, that there is some point at which they could be “ready” for professional practice. As students embark on their careers as professional practitioners, most begin to accept and even appreciate that their journey is not ending as students, but rather just beginning as lifelong learners. Some students say they feel overwhelmed, yet several speak of realistic ways to continue to learn, including: journal clubs, dialogue with colleagues, conference attendance, keeping in touch with professors and instructors, reflection, and journaling. The journey of professional growth has just begun. In the words of one student:

There is still a long journey ahead, which will likely never end. This journey, however, makes me strive to be the best I can and be the best professional I can be for my clients (1010-3).

4.6.2 Relationships with clients and professionals

From egocentric to client-centered to relational.

Egocentricity is a prominent code in the early stages of student development. Here are some representative statements of students' focus on their own needs, emotions, and how they appear to others:

I was getting tired and I knew the patient was also getting tired and frustrated. I was concerned that I wouldn't be able to get accurate results or a full audiogram and we were supposed to complete a hearing aid evaluation after the assessment so I was beginning to panic about how much time the assessment was taking (1014-1).

I was really frustrated because I had felt that there had been a lot of no show patients and waiting around during this placement and I often found myself bored at times [...] I was also disappointed because I really wanted to see the diagnostic ABR procedure for infants because I have not experienced it before. Since we did not have patients for the rest of the afternoon, luckily I was able observe with another audiologist in the department who was working in the hearing aid dispensary. This made me happier because I would have something to do and be able to see patients.[...] He did not understand what everyone was telling him and it was annoying me (1007-2).

Client-centered practice is a prominent concept throughout development, but although it is mentioned early on, its increasing importance and a stronger understanding of its importance develops as students grow. For example, at Time-point 2, a student wrote:

I have realized lately that is often easy to end up in a position where one focuses on their own performance rather than on whether they are truly working towards the greater goal of providing a valuable service to those individuals in society in need. I think I personally need to remind myself of the bigger picture when I end up falling into that fallacious thought pattern. I chose Audiology largely because it is a helping profession and, put simply, helping people is something I am passionate about (1008-2).

In the next example, a student early on demonstrates thinking that client-centered practice really means doing what is best for the individual client, based on needs identified with that client. At times, this approach may require a bending of the rules, or rather, an adaptation or expansion of one's espoused theory:

Our audiology class was taught that difficult-to-test patients, such as children, may require more than one appointment for an audiologic assessment. However, many of the patients seen during my placement travelled from rural areas for their appointments and I believe that this must be taken into consideration as well (1015-1).

A move from client-centered practice to family- or relationship-centered practice is a later step for some students in the mid to later stages. The following example demonstrates the beginnings of this move as a student considers that there is more to the client-clinician relationship than simply addressing the client. This student describes the family as client:

This helped me realize that you have to consider everyone in the appointment and the patient is not the only one with concerns. Everyone's concerns need to be addressed and there may be conflicting points of view between the patient and their family members who accompany them. This was very valuable to see; however, just thinking about that concept now (conflicting points of view) makes me realize how hard that aspect of Audiology is. Addressing everyone's concerns and trying to find middle ground (if it is possible) seems above my level of expertise at this point in my training/education. With time and experience I am sure I will become better at it but right now I do not feel confident in this area (1007-2).

At the student stage, a client-student-supervisor triad is also a factor in relational development, a point which several participants raise. One supervisor states:

and yet again because I so many of my patients I know so well when I'm there they don't get the opportunity even, right ... because the patient interacts with me

and so there's this triangle always, so I need to actually step out of the room to allow the student that opportunity .. to, to be the clinician and um as much as sometimes they're not feeling confident or ready to do that you know I think [...] ultimately they realize, and then they say well what do I do, what do I do, and I say if you get to something you don't know then you can I'm around I'm here in the clinic, you know I don't usually go far (2002-2 interview).

Reflection enables a realization of the bi-directional nature of client-clinician relationships (Nisker, 2006); that is, the clinician is not necessarily the holder of all knowledge and information pertinent to enabling successful audiologic management for a patient. The challenge of truly facilitating a client's openness and partnership seems challenging. A few students at Time-point 2 and new practitioners at Time-point 3 begin to describe this realization to an extent. A clinical faculty/supervisor speaks of her continued learning about this bi-directional relational challenge:

I think that's a huge process too – how do I present information and is it enough when I give it once and so it's changing what I do in the clinic ...and...I think the way it changes is that I'm probing more about what their understanding is, and going back – so even though I fit your hearing aid and you seem to be doing fine, I'm not sure that you really are unless you show me. So, I may be more having them actually do things sometimes instead of just saying "how are you doing," "oh I'm doing fine ..." [Researcher]: You're not just taking it for granted if they don't have any complaints... [2002]: Exactly [...] So um maybe just involving them more so that I become more aware of where things may break down for them, um, even though they would come in and tell me everything's good [laugh] (2002-2 interview).

I extend that this bi-directional relationship forming is also related to a tendency toward critical consciousness because it recognizes the dynamic between client and clinician, which may potentially involve power differentials (Section 4.4.5) and realizing and negotiating assumptions.

4.6.3 Professional goals and values

From idealistic to optimistic to realistic.

Early on, idealistic statements of professional impact demonstrate identification with the helping, caring nature of audiology as a profession.

You are not really taught at school that you will affect patients' lives in some way or another. But hearing is an important aspect of patient's lives and if you can solve some of their problems and make their life that much easier whether they have a million other health concerns or other concerns in life then you will impact them. And most patients may not tell you that they appreciate it or that life is that easier but then that one patient comes along and hugs you or tells you how they feel and it makes you realize what you are doing does make a difference to someone (1007-1).

A sense of optimism seems to carry through to the first few months of practice for many new practitioners:

Overall, my time spent as an audiologist so far has been very rewarding and I have learned a lot about audiology and about myself (1004-3).

I'm glad I made the decision to start off in a hospital for my first job and I guess we will see how things go in the future! (1017-3).

Yet, the realization that we “can't help everyone” is experienced by some students as they transition from student to practitioner and realize the realities of practice.

I understand that I may not be able to help everyone and that some patients have difficulty accepting hearing loss and developing realistic expectations for treatment; however, I still find myself worrying about these situations and thinking about what else I can do or what I could have done differently (1004-3).

It can be difficult for new practitioners to balance the needs of their clients with the needs of the organization for which they work. Personal beliefs, professional values, and espoused theories may at times clash with reality. These challenges are related to Section 4.3.5. In the example below, a new practitioner discusses the need to balance her professional values with the reality of her work situation:

The system I am currently working is a private-practice model. I enjoy the full spectrum of clients that I get to work with. I also get to see the patient from the initial assessment straight through to receiving hearing aids and any follow-up. This part of private practice I enjoy – watching the client move through all these stages. The downside of this model however, is the focus on sales. I am not a saleswoman and find it very hard sometimes to put that hat on. This is one aspect of the profession that I am still trying to find balance in. I want to provide help for my clients in any way possible and provide them with the best care but also deal with the business end of things and sell enough hearing aids to ensure my position (1010-3).

Based on the data that indicate a struggle to balance espoused theories (including personal/professional goals) with goals of businesses/employers, I posit that the balancing of these goals (new practitioner's goal of optimal client-centered care with business' goal of sales) is perhaps an art best learned on the job. Early in a career, the realization of the need for these balances emerges. The current study ended just as new practitioners were beginning practice (two to four months); thus, it is not possible to theorize the development of such negotiation skills.

4.6.4 Critical consciousness

From self reflection to critical reflection.

Early on, students rarely share reflections on issues of: systems, power relationships, assumptions. These topics of reflection represent a critical consciousness that students in the early stages are not sharing in their

reflections, perhaps because they are focusing on learning procedures, improving efficiency, and avoiding mistakes. See Section 4.4.5 for a discussion of critical reflection that students and new practitioners demonstrate once their critical consciousness is opened up by experiences that afford this consciousness. Critical consciousness is discussed in depth as part of the “reflection as a tool” facet because it is so intertwined with reflection, and would likely not develop without reflective processes (Kumagai & Lypson, 2009).

4.6.5 Professional socialization

From dependence to independence to interdependence.

Professional identity is a property of the facet of reflection as a tool, discussed in Section 4.3.6. In that facet, identity is theorized in a personal sense. Here, professional socialization is discussed in terms of becoming a part of the audiology community with less individual focus.

All new practitioners who participated mentioned that they are keeping in touch with former classmates who help shape their place and comfort within the profession. For example:

I realized um [fellow practitioner's name] (she was in the year above me at [school]) and she's out here in [city] and so I find myself going to her a lot and kind of talking things out and I think that can be reflecting a lot on stuff and just be able to bounce things off of her has me thinking things a lot more than I think I even realized I was (1013-3-interview).

This interdependence and drawing on each other as resources demonstrates community of practice (Wenger & Snyder, 2000), which is intertwined with professional identity. For instance:

I did some more research and spoke with other people who work for the company and I discussed my dilemma with my family and some of my closest audiology classmates (1007-3).

After beginning to write this reflection and reflecting on my lack of reading over the past few months, I have decided to contact my former study group and suggest that we schedule an online meeting at a certain time every month to discuss recent journals we have read (1004-3).

Early identity development is demonstrated in attempts by some students to appear competent and professional, to act as if they are a professional, even if they do not yet feel like professionals. As students progress through the audiology education program, most begin to see themselves as emerging professionals, and feel some pride and uncertainty associated with their newfound identity. Finally, after practicing, new practitioners identify as audiologists and feel a part of a community of practice, although at this point some questioning about what type of practice would be desirable and optimal begins. For example:

I feel that sometime in the future I may wish to try another position within the umbrella of audiology. It would be interesting to work for a hospital and perform more diagnostic tests. It would also be interesting to work at a centre that specializes in the care of children, as I do enjoy working with children. It would also be interesting to work for a manufacturer to see that “other side” of the profession. Ideally, I would like a position that could cover all these areas – however, that is likely unrealistic! (1010-3).

The transition to professional practitioner is welcomed more by some new audiologists than others, with this variability perhaps (I posit) dependent on personality as well as perhaps the setting in which practice begins. Consider these two different experiences:

The job has gotten a lot better since then and I am learning a lot; however, I do find it hard with only 1 other audiologist being there to start off [...] I’m still finding it a bit difficult to be in a full time job and not to be in school. I find myself sometimes wishing I was back in school again! It’s hard to believe, but you

always think that when you're in school that you want to be out working and when you're out working, you want to be back at school! (1017-3)

I got lucky because I ... I ended up getting exactly sort of what I was looking for and I'm really enjoying it ... (1008-3 interview).

Finally, professional socialization in terms of relations with other professionals can develop more strongly post-program completion. For example:

I'm working with um a hearing instrument practitioner, and he is wonderful...[...] actually surprises me almost weekly by kinda being like you know I don't think a new hearing aid right now is the best bet for you or I think we should really only go with one over two um and he just really isn't about that over selling mentality that I thought I would be surrounded by in this environment (1013-3 interview).

Assumptions about other professionals can change as students become practitioners and are thus engaging in professional relations and interactions with not only other audiologists, but also related health professionals, and in interprofessional practice.

See Section 4.3.6 for more on professional identity within the individual (as opposed to the joining of a community).

4.7 A multi-faceted theory

As mentioned in the introduction to this theory, it is multifaceted, and each facet is connected to the others. All facets surround the core of the prism of reflection in the development of audiology students as professional practitioners, which is the development from student to professional. The example below highlights the multi-faceted nature of this theory, and how each facet is related to the others. The type of feedback / probing questions I provided to students is also demonstrated through this example.

A student's first written reflection focused primarily on frustration she experienced when parents "refuse hearing aids or follow up."

Watching her make these excuses was one of the most difficult things I have witnessed. [...]It was very disheartening to see these children when if they had their hearing aids when they were younger, their speech and language would be much improved, if there were even any delays at all (1013-1).

[Comment from researcher]: Hmm, I wonder if they were excuses, or her coping mechanism at that time, having just found out her child had a hearing loss?

In my feedback to the student who wrote the passage above, I wrote:

I can understand the frustration you feel when parents seem to be delaying intervention for their children; sometimes there are factors beyond audiologic that may be influencing the parent(s) actions. I find it helpful to be open-minded despite what our knowledge and training suggests is best for our patients. Sometimes we can be surprised by what lies beneath the obvious/surface (1013-1 feedback from researcher).

When I later interviewed this individual (at Time-point 3, when she was a new practitioner), I probed about her thinking around this topic. Her perspective had clearly changed:

...over the time I have seen more diagnoses and I've talked to other supervisors about like that moment and ... they're like, that is the most devastating moment in that parent's life so far, and for them to not want to believe you, is so normal and so...acceptable like they need to have that time ... THEY need to reflect on what they've just learned ... and deal with that and they're like and you know a lot of times they'll come back and they'll say you know what they're right I think you're right. I think they are smelling me or seeing that light when I'm opening the door and that's why I'm thinking they're hearing me and responding to me but it's but it's not sound that they're responding to um [...] Even with older adults when you tell them for the first time like oh yep, you do have a hearing loss and we can help you with that. A lot of the times they're like "oh okay well you know I'm still doing alright so ... maybe I'll come back in a couple years" (1013-3-interview).

The participant acknowledged that earlier in her development, she did not understand or agree with the comments I had made on her written reflection:

... so it was definitely yeah pretty eye-opening and I remember you being like, isn't that, like that seems like a normal process and I was like "what is she talking about, how is that normal, like no, oh my gosh, there's something wrong with my kid I need to fix it immediately" but that's not how they're thinking at all so...yeah...(1013-3 interview).

Demonstrated by this example, are all three surrounding facets of the theory. Figure 9 (at the end of this chapter) shows the interconnected theory surrounding the central process of development. We are provided a window into a practitioner's development through the elicited reflections throughout her journey toward professional practice. This window allowed a view of the espoused theory of early intervention creating a tension for the student as she witnessed a parent "making excuses" and delaying the intervention her child needed, as per the research evidence on outcomes of early intervention.

In terms of reflection as a tool for growth, the student used reflection including dialogue with supervisors, continued thinking about the reflection she had written long ago, and my feedback in response to that reflective writing to grow her perspective and thinking around this topic. In terms of reflection as a developing behaviour, in her early stages, the student was not ready to see beyond her training, to supplement dominant discourses of early intervention with experiences that challenged these lessons learned in school. Later, with more experience and perhaps readiness, and through interaction with critical companions, her perspective broadened.

The longitudinal nature of data collection in this study, with the same participants contributing data up to three times from their first external clinical placement through to their first few months of practice, allowed for this central facet of development to be theorized developmentally.

Figure 9, below, combines the underlying developmental journey from student to professional depicted in Figure 8 with the three facets of reflection shown in Figure 4. This figure is depicted as a flower, as a metaphor for growth. The stem of the flower represents the developmental journey from student to professional, the “sepals” or facet-like pieces show the vital supportive role of reflection in this journey, and the “petals” or pie pieces within the circular, foreground center, each represent one of the developmental properties of the journey from student to professional. The “pistil,” or the diamond-shaped center, labeled “facets of reflection,” places the multi-faceted role of reflection as a source of continuous development or growth, in the center and background of development and practice.

The metaphor of the flower could be taken further in that flowers need certain factors to flourish, just as students and new practitioners need appropriate and supportive conditions to develop. These factors are considered in the facet of reflection as a developing behaviour, including faculty fostering and inspiring.

The arrows that surround the “petals” of developmental properties are to indicate the dynamic nature of the properties and the possibility of rotating this circular center so that each developmental property (e.g. professional socialization) can be paired with each facet (e.g. tool). In rotating this central piece it is possible to align each petal with each sepal, or each developmental property with each facet of reflection. Thus, this figure ties together the developed theory of Reflection in the Education and Socialization of Practitioners: Novice Development (RESPoND).

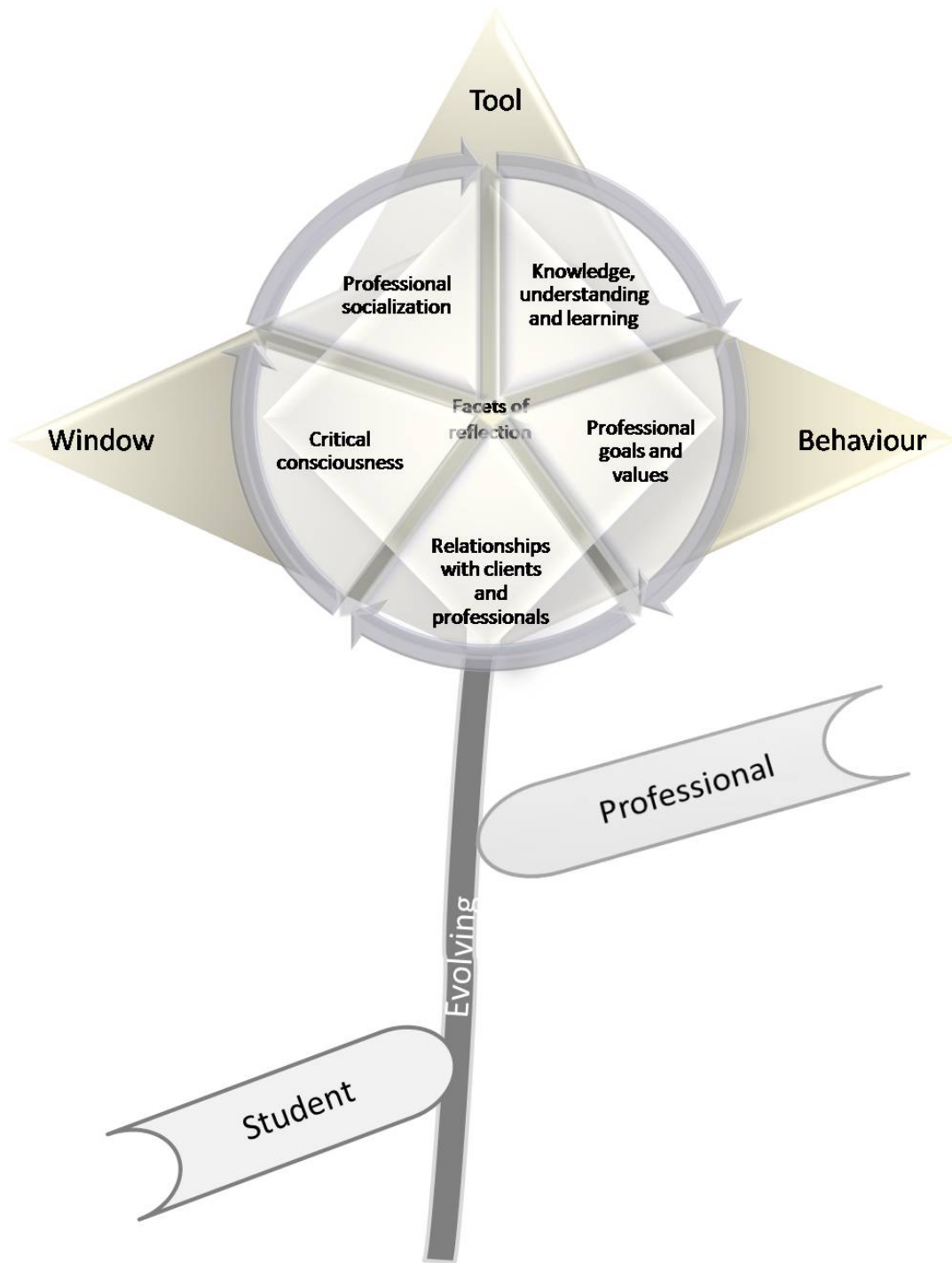


Figure 9: The RESPOND theory: Reflection in the Education and Socialization of Practitioners: Novice Development. A grounded theory of the evolving practitioner, supported by reflective processes.

Chapter 5

5 The RESPoND grounded theory

This chapter begins with some reflexivity revealed and a brief explanation of the scope of the grounded theory shared in Chapter 4. Key theoretical contributions are discussed and then the theory is explored in the context of the three main themes of reflection and reflective practice identified in Chapter 1 as “the backbone of reflective practice” (Section 1.2). This discussion is followed by a comparison of the theory to related literature in audiology and other health professions. Explicit and implicit implications of the theory are then discussed followed by an evaluation of the study and theory’s quality, strengths, and limitations. Reflections on the research process itself and ideas for future directions lead to the conclusion of this dissertation.

At the outset, it is critical to do two things. First, I need to define some concepts that are central to the discussion and that have not been highlighted previously (Table 3). Second, I need to describe two experiences that occurred over the course of doing the research for this dissertation that have impacted my espoused theories of practice, research, teaching, and community to such a strong degree that they need to be shared for the reader to have a glimpse through my reflexive lens.

5.1 Reflexivity revealed: My practice, teaching, and the research journey

Constructivist grounded theory and completion of a doctoral dissertation are not only academic endeavours, but also personal and professional journeys. Throughout this journey, I engaged in related professional activities, including practice as an audiologist in a public education system, and teaching within the school (but not cohort) in which participants were enrolled.

Table 3: Concepts for discussion, defined

| Concept | Definition | Reference |
|--|---|--|
| Bidirectional learning/generosity | Reciprocal trust, obligation and generosity between patient/client and clinician, or between student and teacher/supervisor. | (Frank, 2004; Nisker, 2006) |
| Community of practice | A group of people who share a concern or passion for something to do and learn to do it better in their interactions with one another. | (Wenger & Snyder, 2000) |
| Compassion fatigue and clinician burnout | Compassion fatigue is a shift from a care professional's hope and optimism about the future and value of their work toward physical and emotional exhaustion resulting in a change in the ability to feel empathy for patients. When this occurs long-term, and repeatedly over time, may become clinician burnout. | (Maytum, Heiman, & Garwick, 2004) |
| Critical consciousness | Inspired by Freire, a reflective awareness of differences in power, privilege and inequities embedded in social relationships and a reorientation of perspective toward a commitment to social justice. | (Freire, 2007; Kumagai & Lypson, 2009) |
| Dialogic adult education | A philosophy of adult education that emphasizes dialogue and equality between teacher and learner; an approach to education that is learner-centered and promotes and depends on critical consciousness. | (Elias & Merriam, 2005; Freire, 2007) |
| Self-assessment | Self-determined judgment of one's ability. | (Eva & Regehr, 2008) |

These experiences informed my research, and my research informed my practice and teaching experiences. See Figure 10 for a schematic of how these lenses shaped my theoretical sensitivity. In this section, I will share my reflexivity relating to the interactions of these experiences with my research journey. This exposition may shed light on how my experiences impacted my theoretical sensitivity, thus offering the reader some insight into my interaction with the data that shaped the grounded theory.

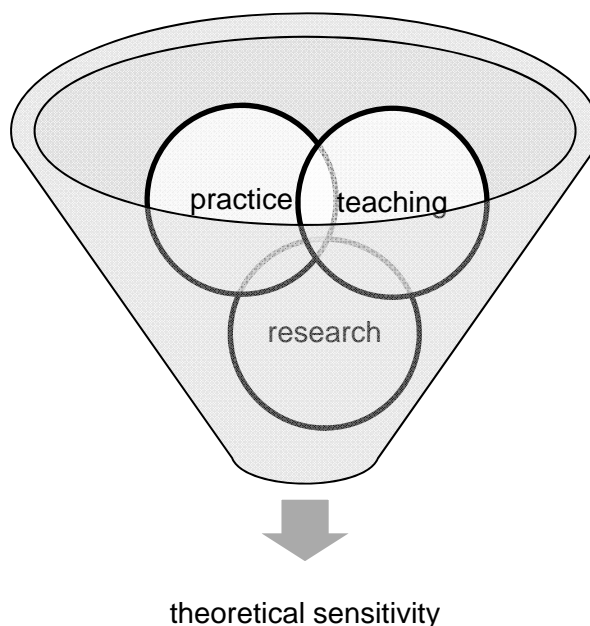


Figure 10: Theoretical sensitivity

As stated in Chapter 3, "...everything I see, hear, smell, and feel about the target, as well as what I already know from my studies and my life experience, are data. I act as interpreter of the scene I observe, and as such I make it come to life for the reader. I grow it" (Noerager Stern, 2007, p. 115). The reflexivity shared with you, the reader, below, is an attempt to expose and explore some of the life experience that indirectly acted as data within this research.

In practice, I experienced a particularly challenging incident as a professional, which began in early 2010 and "resolved" 14 months later. Along a similar timeframe, in teaching, I experienced a significant learning opportunity that was borne of a very discouraging and demoralizing first teaching experience in early 2010, with its impacts staying with me to this day. The stress/distress of both situations was largely lifted, in the spring of 2011. Both of these experiences initially threatened my belief in and commitment to my profession and my scholarly life, but were ultimately transformed into liberating, rejuvenating, and educational opportunities.

The practice incident involved another professional calling into question my professional integrity, namely ethical, caring, and respectful practice. The matter was eventually resolved with an outcome that dismissed all claims made against me, but the year leading up to this dismissal was trying and its impacts continue. I found myself moving through many emotional stages: feeling defensive and then introspective, self-doubting, anger, and finally, feeling the weight of the experience lift. While this experience sat in the background of my consciousness for fourteen months as a negative stressor, it resolved in a way that I believe was just and it certainly pushed me to grow. I had been trying to advocate for a child with hearing loss, in an indeterminate zone of practice, when the situation arose. The professional and personal toll that emerged led me to re-consider my investment of energy into these “swampy” practice situations. However, the lesson to be learned from the experience was yes, to be careful and prudent in all practices and to document all compliance with regulations and standards of practice (ultimately this documentation was crucial in the dismissal of the allegations). But also, to maintain trust in that acting in the best interests of the patient/client, complying with ethical codes and practice regulations, and being motivated by the goal of eudaimonia for the patient, is truly the right thing to do as a professional. Although I did not always “trust” that the system would find me “innocent” throughout the fourteen months of uncertainty, in the end, it did. Interestingly, at times, I believe I did not even truly trust myself in feeling that I was “innocent,” questioning my motives and re-analyzing my actions *ad nauseam*. The support of colleagues was crucial in preventing me from being overly self-critical and paralyzed by the doubts that had entered my consciousness. My reflections upon my reflection-in-action within the situation under investigation also continually reassured me that I had acted professionally and in the best interests of the child and her family.

In my first teaching experience, a similar questioning of my motivations and character occurred. A misinterpretation of my goals by the students in the class – or perhaps a misrepresentation of my philosophy by me, or even a mismatch between my philosophy and that of my co-instructor – resulted in a negative,

even toxic, course dynamic. Together with my co-instructor whom I respect greatly, I struggled through the aftermath of the course, wondering how I could have salvaged, or re-directed, the de-railing train. I believe the students (based on my own observations through the course and the students' comments on the course evaluations) felt that the course, in which I had hoped we would engage in dialogic adult education, was overwhelming, unpredictable, and unsafe. My attempts to engage meaningful dialogue, with my efforts to push students' thinking further and deeper, were interpreted by students as attacks or unwelcome challenges. The students were perhaps not accustomed to a dialogic and safe learning space in which we would question and push each other's thinking, and I had not adequately prepared them for such an experience. Having come from an empowering safe space of learning in my recent doctoral courses in which I was a participant and not a facilitator/leader, I had neglected the most important of steps in creating this type of learning environment. I had not allowed students to know and trust me, and had not assessed their knowing and trusting of each other, before attempting a course plan that would demand this mutual respect and understanding.

Despite this haunting first teaching experience (I say haunting because the words of disappointment and disdain as written on the course evaluation by members of the cohort continued to appear in my mind for many months), I continued to subscribe to the philosophies of dialogic adult education, of critical pedagogy, of learner-centered education that I had come to know through my doctoral education and that I had truly always craved as a student. I reflected (possibly excessively) for the eight months between my first and second teaching experiences and consulted critical companions and theoretical and practical lenses throughout. The first day that my second attempt at teaching began, I made myself vulnerable to the class, with openness and honesty, knowing that to "make it work" this time around, I had to do what truly felt like "risking everything." In that first class, I almost immediately felt the burden of the previous year's failure wash away at last. I arrived home after that first class to multiple email

messages from students, thanking me and expressing their renewed excitement for learning.

Throughout and at the end of the teaching experience, I received countless comments from students describing their appreciation for the “novel” approach I had enabled in the course. One student wrote: “I waited a long time for that kind of class and you delivered beyond my expectations. Going out into the field, I feel inspired to do good work and continue to learn. [...] I think I’ve always been a naturally reflective person, but from you I’ve learned the tools to be more aware of it. Because of you I’ve decided to keep a journal. You’ve shaped my professional identity and I feel blessed for it.” Others expressed their recognition that I had taken “a risk” and made myself “vulnerable” in order to offer them a “refreshing” approach to learning.

What was the difference between these two teaching experiences? I have asked myself this question incessantly. I have reasoned that there were a number of factors influencing the disappointment versus success despite my consistent belief in philosophies of dialogic adult education for both courses. These reasons are plentiful and beyond the scope of my dissertation discussion, but I do believe the main reason for success in the more recent experience, was the creation of a safe space in the first class. In this session, I framed my own experiences openly and explained the philosophy and approach that would guide the course, letting the learners get excited about a way of learning that would enable their lifelong professional growth. Further, by engaging in reflection throughout the course to ensure that the safe space we had created together was maintained and utilized, students became a part of the creative knowledge building process. I believe that the learners in this cohort appreciated that I had “taken a risk” and “made myself vulnerable” (as per their comments) and were thus willing to do the same in return. In sum, my lens was shaped into a stronger belief in bidirectional learning within a community of practice through a dialogic, reflective space. I acknowledge that because learning is indeed bidirectional, that there may have been cohort and class dynamic effects making the two experiences so different.

A difference in value placed on grades was also set early on, and students seemed to “buy in” to the shift in value toward a meaningful process and valuable feedback exchange rather than a quantifiable measure of learning.

Engaging reflection to help me work through what could have been a discouraging year resulted in professional growth and afforded me emotional self-care. Often in learning and practice we attempt to put emotions aside. Yet, in my experiences described above, emotional learning was necessary for improvement in my practice and teaching. I believe that this dissertation experience provided me with a discourse to optimize experiential learning, as I found myself re-framing challenges and problems as opportunities. Throughout this journey, the importance of a strong community of critical companions in my personal and professional lives was also emphasized repeatedly, as was the potential detriment of destructive relationships.

Reflection is often theorized as an internal and personal process, but in the developed theory, the relational element of reflection prevailed, perhaps because students are so dependent on others as their professional knowledge and identities took shape. The experiences described above impacted my espoused theories of practice, research, teaching, and community to such a strong degree, that although very personal, I needed to share them with the reader here, to provide a glimpse through my interpretive lens.

5.2 Scope of the RESPoND grounded theory

The developed theory is based in data from one cohort of audiology students. How far might this substantive theory reach? The RESPoND grounded theory presented in Chapter 4 posits the role of reflection in audiology students’ development as professional practitioners. Specifically, it responds to the question of “How is reflection enacted and implicated in audiology students’ development as professional practitioners?” Enactment is explained in terms of: how audiology students use reflection, both consciously and unconsciously, as a tool in their development as practitioners, and how they develop reflection as a

behaviour alongside and intertwined with other properties of professional development. Implications of reflection in the journey toward professional practice are theorized in terms of the window that elicited, guided student reflection opens up for supervisors, professors, and mentors. This window provides a look into students' development, and how reflection may influence this development. The theory is summarized in Table 4, in a way that shows the theory's scope and the interconnectedness of the facets: Reflection as window, as tool, as developing behaviour, all related to the central facet of students' development as professional practitioners. This table also lists the individual properties of each facet.

Although this theory was developed from data provided by students from one cohort and some of the cohort's clinical supervisors, the processes (e.g. professional socialization, professional development) and constructs (e.g. reflection) that were explicated, and the theoretical concepts that were exposed (e.g. emotional self-care, critical consciousness) are somewhat generic. Although tied to the context in which they developed, these theoretical insights may have an influence on audiology education (the focus of this work), professional development, and possibly even on other disciplinary fields through its facilitation of understanding.

5.3 Discussion of the theory

Key contributions from the developed substantive grounded theory (described in Chapter 4) to the theoretical landscape of reflective practice are now discussed with reference to the literature. The following section details six theoretical insights that developed as a result of the substantive theory. These insights demonstrate the bidirectional nature of theoretical sensitivity. That is, theoretical sensitivity influenced and made possible the emergence of these properties of the developed substantive theory. Moreover, theoretical sensitivity also allows the grounded theory to enrich the pre-existing sources of knowledge that informed the theoretical sensitivity.

Table 4: Interconnected RESPoND grounded theory

| Facet | Properties | Central facet: Evolving practitioner |
|-----------|--|--|
| Window | Challenging experiences Supervisor relationships: The supervisor-student dance Self-perception and supervisor feedback Unique trajectories of growth, readiness and capacity for reflection Tacit values and espoused theories: Tensions revealed | Knowledge and understanding Learning |
| Tool | Emotional self-care Storying experience for experiential learning Working through challenges: Clinical reasoning and critical thinking Development of critical consciousness Self-assessment, evaluation and goal setting Development of: Empathy, counselling skills and relationship-centered care Complement to evidence-based practice | Relationships Professional goals and values Critical consciousness Professional socialization |
| Behaviour | Critical incidents Writing Faculty inspiration and fostering Value and place for reflection | |

5.3.1 Critical companionship and faculty/supervisor inspiring and fostering

The notion of a critical companion, a dialogic partner who promotes one's reflective thinking through listening, enabling, challenging, critical questioning, and supporting development and growth, has been theorized in other health professions (Higgs & Titchen, 2001; Johns, 1984, 2002). In this literature, critical companions are often envisioned as a much more experienced practitioner. Although clinical faculty and supervisors may serve as guides and inspiration for students, critical companionship is likely quite different when the power dynamic is balanced between companions. Students cited examples of critical companionship (e.g., Section 4.6.5) as a way in which they engaged in reflection and received support for development and growth, but also demonstrated that critical companions could take the form of relatively new practitioners. In this way, the new practitioner may not have as much experience as a very

experienced practitioner, but this closeness of age, years of experience, and types of experiences between the student/new practitioner and the critical companion may facilitate or enable a more equal, bidirectional relationship (Nisker, 2006). This relationship could be seen as a partnership and such a supportive arrangement is consistent with the cited needs for professional socialization and lifelong learning within a community of practice (Wenger & Snyder, 2000).

Faculty/supervisor fostering and inspiring of reflection was revealed through the theorizing process as a crucial mechanism by which students learned to value and enact key professional behaviours such as: client-centered practice, reflective practice, and empathy, sensitive practice, and respect. The words fostering and inspiring are specifically chosen to be explanatory with regard to the non-explicit teaching and learning that occurred, which students and clinical faculty/supervisors were able to identify and articulate in Section 4.5.3. Students did express a belief that explicit teaching of reflection and reflective practice could be worthwhile, with explicit teaching as an awareness-raising necessity rather than a main mechanism for inculcation of reflection and reflective practice. Once awareness of these processes is raised, the developed grounded theory suggests that an implicit, tacit, enacted value and modeling of performance is likely to inspire and foster reflective practice in students. In Section 5.1, I shared my own experiences with inspiring and fostering reflective practice as an instructor in a very non-explicit way. Students engaged in a reflective, dialogic, community of practice and spoke of their plans to continue in this vein. Yet, in the course I only explicitly mentioned reflective practice once in passing with some optional readings on reflective practice made available on the course's online space. Students likely knew of my research interests, and interpreted the way I enacted my professional values as a fostering of reflective practices. Also, see Section 5.5 for practical implications and applications of the findings relating to critical companionship, and clinical faculty/supervisor inspiring and fostering of reflection and reflective practice.

5.3.2 Naming experiences, storying experience, and experiential learning

Shifting from tacit enactment and development of reflective practice, I will now discuss an interesting piece of the theory that focuses on the explicit storying of experience as a reflective way toward learning. As discussed previously, within the developed grounded theory, reflection is theorized as part of the process of experiential learning (Section 1.1.3). Drawing from the cycle of experiential learning (Kolb, 1984), reflective observation and abstract conceptualization may be implicated in the written storying of experience, which begins with naming an experience as meaningful whether it was challenging, thought-provoking, or transformative (identifying a critical incident).

Naming the experience should not be overlooked as an important benefit, as Brookfield (1998) noted the importance of finding a lens and language with which to perceive, reflect on, and navigate experiences. After naming the experience, the storying of the experience leads to reflective observation and abstract conceptualization (Section 4.4.2). Many students abstracted learning experiences from their stories, and stated their goals to attempt to change or improve future practice at the end of their story, which is an example of goal-setting and planning, or anticipatory reflection toward active experimentation. Although students were given a guide for reflecting on critical incidents (Appendix B), which are concrete experiences, students sometimes chose to reflect more openly rather than on one critical incident. Yet, in these cases they still tended to move through Kolb's (1984) experiential learning cycle, which thus supports Kolb's theory and the interconnectedness of experience with reflection, and validates the importance of reflective practice for generating new knowledge based in experience.

The integration of the developed theory with existing theory on experiential learning is important, and the experiential learning cycle (Kolb, 1984) is particularly pertinent to audiology because of its role as one of three key components of reflective theory for audiology as identified previously in the

section on the backbone of reflection for audiology (Chapter 1, Section 1.2). In Section 5.3.7, I discuss the relevance of the developed theory to these three key considerations for audiology. This particular piece is discussed here instead, because it is such an integral part of the developed theory even standing apart from the theoretical threads identified previously. Yet, it also relates directly to the three key threads pulled from the core extant theory and as such is referenced in both places.

5.3.3 Compassion fatigue and clinician burnout: a need for emotional self-care

Related to storying experience, one can work through his/her emotional experiences through reflection. The role of reflection in emotional self-care (Section 4.4.1) may have implications for the prevention of compassion fatigue and clinician burnout (Maytum, et al., 2004). Emotionally intense work settings can have higher rates of compassion fatigue and clinician burnout (Maytum, et al., 2004). Workplace politics and systemic challenges aside, some audiologists find themselves in emotionally intense work settings by nature of their professional role, informing a mother of her baby's hearing loss, for example. Emotional self-care as a processual property explicates the role reflection plays in affording developing clinicians an outlet through which to name, make meaning of, and find solace in emotionally trying clinical experiences. Thus, it is possible that reflective practice may ameliorate some of the otherwise pejorative effects of continuous emotional drain in practice.

Emotional self-care through reflection offers an outlet for storying emotional experiences in order to lead toward learning, renewal, and self-care. This is especially important in a changing climate of healthcare and professional practice, with pressures of accountability and time and resource constraints making it difficult to serve patients/clients in an ideal way (Kinsella, 2006b). Critical reflection, expressed through writing, can be powerful in that it may not only serve as emotional self-care and help maintain the joy for and commitment to a profession, but may also offer a resistance to dominant discourses. This

resistance may offer a way for clinicians to act, to advocate, and to have a voice. Kinsella (2006b) discussed a similar use for reflection termed poetic resistance, in which poetry is used as a medium for clinicians to illuminate tensions and foreground otherwise silenced experiences.

Drawing from Kinsella (2006b), I posit that if clinicians are afforded ways to engage in a resistance to dominant discourses when those discourses silence their experiences, they may find ways to avoid or overcome apathy, discouragement, and disempowerment. As shown in the developed theory, reflection has potential to offer such a way to emancipation from dominant, oppressive discourses and unsettling circumstances, providing emotional self-care and a space for critical consciousness.

The journey of a student and new practitioner can be challenging, with many sources of stress (Skovholt & Ronnestad, 2003). Self-care and continuous reflection are important pieces in the management of these stressors as a part of professional development (Ronnestad & Skovholt, 2003). Thus, implications of the property of emotional self-care for the prevention of clinician burnout is consistent with the existing literature. However, a new contribution exists as this is the first theorization of how audiology students and new audiologists use reflection for emotional self-care. I acknowledge that reflection has potential to be misused, which could lead to burnout rather than prevent burnout. The likelihood of such a negative outcome is likely reduced if reflection is used consciously as a way to make meaning of experiences for improved future practice. Also, negative outcomes are likely reduced through dialogue and critical companionship. For practitioners who feel isolated in their practice, this community approach to reflection may prove more challenging; perhaps remote populations of clinicians or others who self-identify as more independent or even isolated in practice may warrant investigation.

5.3.4 Critical consciousness

Critical consciousness (Kumagai & Lybson, 2009), inspired by Freire's conscientization (Freire, 2007), is a particularly useful and resonant concept within the developed theory. This concept is not highly different from critical reflection, but it could be seen as a precursor or even prerequisite to engaging in critical reflection and in becoming a critically reflective practitioner. Kumagai and Lybson (2009) compared critical consciousness to critical thinking, suggesting that it complements and contrasts with critical thinking with its focus on not only the cognitive but also the affective components of practice.

This study's developed theory highlights the types of incidents and experiences that seem to support the development of critical consciousness in audiology students/new practitioners, such as systemic constraints, humanitarian efforts, ethical dilemmas, and incidents that elicit a questioning of assumptions. Thus, if we agree with Kumagai and Lybson (2009), Freire (2007), and others (Brookfield, 1998; Kinsella, 2006b; Wear & Castellani, 2000), that critical consciousness is a trait we wish our students to achieve, we may seek to raise awareness of and exposure to the types of circumstances that will foster the development of critical consciousness in students and new practitioners. This type of approach would also align with the aforementioned (Section 1.4) goal of achieving eudaimonia for our patients/clients; that is, in order to truly help patients/clients realize their utmost happiness, we would need to concern ourselves with the development of critical consciousness. Critical consciousness would help us enact the following message, previously shared in Chapter 4:

Give [the patient] what [s/]he needs, don't give him what you think [s/]he needs. Or what you think [s/]he should need (2005-3-interview).

The quotation above could serve as a reminder to all clinicians to engage critical consciousness in practice to support patient eudaimonia.

5.3.5 Embracing uncertainty

A related challenge of many clinical educators is to enable students to embrace uncertainty in the midst of learning the scientific bases of their professional knowledge (Spafford, et al., 2007). Recently, instructors' complaints and observations of student entitlement have been documented in the literature (Greenberger, Lessard, Chen, & Farruggia, 2008; Lippman, Bulanda, & Wagenaar, 2009); that is, the apparent trend of recent students desiring and even demanding straightforward, recipe-like knowledge, spoon-fed information, and excellent grades for minimal effort. This static vision of knowledge described in the entitlement literature is something that I believe is likely re-shaped when students enter practice and realize how lifelong their learning truly is, as per the theoretical property about knowledge and learning (Section 4.6.1). Indeed, in the developed theory, students initially saw knowledge as something they needed to sufficiently obtain before graduation; upon graduating, students talked about knowledge as something that could never be complete. How may we begin to enable students to understand and embrace uncertainty *before* they enter practice? Would such enablement allow for improved learning during the clinical education program?

My reflexivity throughout my final year and a half of doctoral studies led me to believe that although there may be a shift in the feelings of entitlement, or expectations of the current generation of future professionals, we as instructors, supervisors, and mentors, may need to shift our own approaches toward teaching, supervising, and mentoring. Creating an "us versus them" dichotomy through the pejorative discourse of the entitlement literature may further divide us and reduce potential for bidirectional learning.

As expressed in Section 5.1, I believe that if we approach students/learners with openness, honesty, and vulnerability, we may enable them to do the same with and for us, and with and for their future patients/clients (Nisker, 2006). If we do attempt to enable students to embrace uncertainty, we may better prepare them for the realities of practice. The current study's grounded theory showed that

students can reach a point of understanding that learning is lifelong and that practice is not black and white. Yet, they expressed difficulty in navigating these uncertainties as new practitioners and related their lack of comfort in these situations to a lack of prior exposure. Notably, some of the clinical supervisor participants mentioned that they had observed variability in students' self awareness, and in their desire for and receptiveness to feedback. These participants acknowledged that this trend could be related to the generational shift in perspectives toward learning and professionalism.

Again, I believe the developed theory would suggest that there may be a need to explicitly enforce that we do not have all the answers, that we all require external lenses to help us grow, and that supervisors and mentors see students through experienced lenses. Further, if the guides in students' lives model the seeking of these external lenses and do not hide the experience of the indeterminate zones of practice, students/new practitioners may also begin to adopt these attitudes through their professional socialization. When students have a supervisor, they often feel they have a "safety net," someone to turn to when they need help. In the clinical faculty/supervisor interviews, all clinical faculty/supervisors mentioned their own uncertainties at times and how they navigate these uncertainties. It is possible that until students become new practitioners, they do not experience these uncertainties as givens of professional practice. As students, they see their uncertainties as shortcomings, or as characteristics of students who need guidance, with their supervisors viewed as having the answers. One clinical faculty member mentioned the approach of answering questions with questions, of probing students to solve problems through their own resourcefulness. This approach may indeed support a way to navigate and embrace uncertainty as not only a fact of professional practice, but as a joy, a reason to continue to be motivated and passionate for a lifetime of learning and professional growth. The discourses within the audiology profession may support or deny students an appreciation for uncertainty in practice (Spafford, et al., 2007), and it is potentially at the discretion of the guides and leaders of the field to shape this discourse.

5.3.6 Beyond self-assessment

Self-assessment alone is potentially fraught with inaccuracy and has essentially been debunked as a pedagogical tool (Eva & Regehr, 2005). However, rather than conflate reflection with self-assessment, the developed theory shows that reflection is a much broader thinking and learning process that may support self-assessment, and may not be constrained to the same limitations. Reflection is a more relational and affectively inclined construct than self-assessment and is thus likely to overcome some of the problems of isolation from other lenses to which self-assessment falls victim.

In the medical and health professional education literature, Eva and Regehr (2008) have differentiated self-assessment from self-directed assessment seeking, reflection, and self-monitoring. Self-assessment is differentiated as the self-determined judgment of one's own ability, whereas reflection is defined as a pedagogical approach that involves seeking understanding to solve that with which one is faced. Eva and Regehr (2008) suggest that asking "why" questions in practice, in an effective way, does not require insight into one's own level of knowledge or abilities because the answers to these "why" questions in practice are better answered through exploration of other sources of information.

Reflection, in the developed theory, seemed to include and involve self-assessment as students reflected on their actions, what they could have done better and what they did well. From the perspective of supervisors, some students were quite good at accurately assessing their competence while others struggled. Further, some students were open to feedback while others were not (Sections 4.3.3 and 4.4.6). These behaviours are perhaps in line with Eva and Regehr's (2008) notion of self-directed assessment seeking, as the self-directed pedagogical activity of looking outward for formative and summative assessments of one's current level of performance.

Eva and Regehr (2008) propose that rather than study the defunct concept of self-assessment, we need to address questions of the role of reflection on

practice as a pedagogical strategy for better understanding the world around us. Further, they posit questions about reflection and performance, sharing of reflection, and transfer of reflection in one context to another. They suggest that these questions and questions like them will help health professions better understand what activities they should encourage professionals to undertake.

In this case, if reflection goes beyond a self-determined judgment of one's own ability and asks questions of "why" to better understand problems in practice, the developed theory is very much in line with Eva and Regehr's (2008) call for more research into reflection and its place in practice and as a pedagogical strategy. The developed theory contributes to our understandings of reflection as a self-directed pedagogical strategy in audiology students' development as professional practitioners.

5.3.7 Three main themes for audiology: Relating the developed grounded theory to the "backbone" of reflection for audiology

I will now relate the grounded theory developed in this study back to the core theoretical literature as per the three main themes for audiology outlined in Chapter 1. This section is necessary to determine if the developed theory aligns with and contributes to the backbone of reflection for audiology derived from the review of the extant theories of reflection and reflective practice. As discussed in Section 5.2, the developed theory offers many useful insights. However, this section will specifically return to Chapter 1 to address the important theoretical considerations for audiology identified from the literature review.

5.3.7.1 Non-dichotomous epistemological position

An interesting finding was that students and clinical faculty/supervisors believed that technical skills must be ingrained before there is "space" for reflection and reflective practice to become prominent (Section 4.3.4). Yet, even in the early stages of learning procedural knowledge, reflection may be implicated. Many students recalled instances of feeling they needed to ask for help or clarification, or to adapt a procedure from how it was learned in order to suit an individual

client. These examples of learning basic techniques involve a need for self awareness and analysis of one's actions, which is certainly a part of reflective practice. Further, students mentioned emotional perturbations early on while still acquiring technical skills that seemingly lacked deep reflective opportunity. These emotions of uncertainty, fear, and nervousness were often navigated through reflection.

In the developed theory, these emotions exist alongside the technical learning that occurs in the early stages of development. So, it would appear that there may indeed be space in the early technical and procedural learning phases of students' development for emotional self-care and for reflection to mediate the learning processes. Thus, technical-rational ways of professional practice and development do not preclude emotional and reflective epistemologies of practice. This theoretical insight is in agreement with propositions by Kinsella (2007c) and others (Bannigan & Moores, 2009; Mantzoukas, 2007, 2008).

During the course of this research, student participants were actively engaged in an EBP project culminating in a critical review shared as written proceedings and a public poster presentation. Students were thus given a fairly strong explicit message about the need for evidence-based practice. Although students did not tend to explicitly talk about an obvious link between reflective practice and evidence-based practice, they also did not seem to rely on one or the other. Often, students would reflect upon the need to look something up and consult colleagues for additional resources, thus reflecting *on* EBP.

All of the clinical faculty/supervisor participants discussed their reliance on research evidence as one source of knowledge, but also emphasized the importance and prominence of experiential knowledge. The language of all participants was very much one of experience *and* research evidence rather than experience *or* research evidence. So, if in the reality of practice there is not a dichotomy of technical rationality versus reflective practice, the next question could be: what is the nature of the non-dichotomous relationship?

In the audiology program that my participants experienced, students reflected on a notable divide between theory and practice, and between clinic and classroom. There seemed to be a more explicit attempt to have students think about the link between research and practice. Several students and clinical faculty/supervisors noted that reflection seemed to help them know when to look to the research literature, and thus related the two theories (reflective practice and evidence-based practice). Interestingly, related to the self-assessment construct of self-monitoring as discussed in Section 5.3.6, “knowing when to look it up” or “slowing down when one should” (Eva & Regehr, 2008) is an immediate, contextually relevant response to environmental stimuli. This definition distinguishes reflection from self-monitoring (Eva & Regehr, 2008). If this is the case, given the prevalence of students reflecting upon incidents in which they knew they should consult a supervisor, or “look it up,” it is possible that one can use reflection-on-action to ensure a learning experience results from a moment that resulted in or required self-monitoring. Further, it is possible that Eva and Regehr (2008) are emphasizing reflection-*on*-action whereas reflection-*in*-action would seem to encompass the construct of self-monitoring, with its potential to identify a problem and change an action while it still has the potential to be changed.

In this line of thinking then, technical rationality and an epistemology of practice would certainly be non-dichotomous. Self-monitoring as a part of reflection-in-action can serve as a topic for reflection-on-action. Self-monitoring notifies the practitioner that a consultation of research evidence is necessary. An evidence-informed reflective epistemology of practice may indeed be a worthwhile and feasible consideration (Bannigan & Moores, 2009; Epstein, 2009; Mantzoukas, 2007, 2008).

Kinsella (2000, 2001) offers a strategy for reflective practice: one’s comparison of espoused theories versus theories-in-use (Argyris & Schön, 1992). This comparison is included here and is thought to be related to the non-dichotomous epistemology of practice, because students often discuss theory and practice dualistically. The developed theory reinforces that all practice is theory-laden;

however, reflection can illuminate tacit values and theories one uses (theories-in-use) while s/he is not consciously aware of the theories' existence. Across facets and properties of facets, students were surprised when reality did not match expectation, or when systemic constraints precluded enactment of espoused theories or best practices. These disconnects, as shown in the developed theory, are opportunities for students to engage their critical consciousness, to critically reflect, and to negotiate the perturbations into new knowledge. As discussed in Section 1.1.2, reflection can lead to emancipation (Habermas, 1971). In this case, emancipation would be from a dualistic or dichotomous theory-reality or theory-practice experience. The resolution of this experience through reflection would enable a non-dichotomous epistemology of practice (Kinsella, 2007c).

5.3.7.2 The importance of experience

Experience is essential to learning and is transformed into meaningful learning and changed practice when reflection is engaged. See Section 5.3.2 for a discussion of the resonance and contribution of the developed theory to this piece of the reflective backbone for audiology.

5.3.7.3 The role of and need for action

Several students emphasized the role of action in solidifying or expanding their learning. They cited examples of especially impactful learning resulting from in-the-moment challenges faced and overcome through adaptation and problem solving (reflection-in-action), and made these experiences meaningful through reflection-on-action.

As mentioned in Chapter 1, a critique by Eraut (1994; 1995) calls into question Schön's theory of reflection-in-action, suggesting it is in fact a theory of metacognition. Yet, Schön (1983) describes a false dichotomy of thinking and doing, thus addressing the critiques of the possibility for reflective thinking to shape action without temporal delay. Schön (1983) states that:

Doing extends thinking in the tests, moves, and probes of experimental action, and reflection feeds on doing and its results. Each feeds the other, and each sets boundaries for the other. It is the surprising result of action that triggers reflection, and it is the production of a satisfactory move that brings reflection temporarily to a close[...]When a practitioner keeps inquiry moving, however, he does not abstain from action in order to sink into endless thought. Continuity of inquiry entails a continual interweaving of thinking and doing (p. 280).

Indeed, in looking at the developed theory, thinking and doing, or thought and action, appear tightly interwoven. This interweaving of thought and action, which is exemplified by reflection-in-action, begins to raise questions about the concept of embodied reflection (Kinsella, 2007b), although this study did not set out to study embodied reflection nor did the data suggest this to be a relevant concept. Perhaps the methods used in this study did not specifically elicit the embodied nature of reflection.

In terms of action as social change, or emancipation from systemic constraints, new practitioners do begin to consider the implications of systemic realities and how these may conflict with espoused theories and espoused professional identities. Although not discussed with participants, the cohort that I taught most recently expressed a strong desire to commit to advocacy for patients/clients and the profession, recognizing that taking action was likely an imminent need for our young and changing profession. In reflective professional practice statements, these students examined their espoused theories of practice, and the realities of practice, reflecting on the fact that the gap between these could be problematic.

I did not probe my research participants on their considerations for advocacy needs in the profession, because it did not develop out of theoretical sampling. However, based on the critical reflection that was shared, the prevailing topic of concern relevant to professional advocacy was that of hearing instrument dispensing, the “turf war” around this issue, and the danger of losing sight of values such as client-centeredness as a result of sales-based models of practice.

Given the research question, it may have been somewhat beyond the scope of this research to begin to probe student participants on their action plans for future advocacy and change in the profession, but this may well be an avenue for future research. As discussed in Section 4.4.1, reflection certainly can contribute to emancipation from unsettling circumstances.

5.3.8 Summary

The grounded theory developed in this project responding to the question “How is reflection enacted and implicated in audiology students’ development as professional practitioners” is indeed multi-faceted and complex. Although each individual property of each facet of the theory is not discussed here in detail, the overall contribution of the developed theory and highlights of particularly interesting properties have been explored. Next, the overall developed theory is compared to existing literature in audiology and similar work in other professions.

5.4 Comparing to similar empirical literature

In Chapter 1, relevant studies involving reflection and audiology were reviewed, but studies from other professions were not. In this chapter, studies from other health professions that also explored reflection in students in a developmental fashion is reviewed for comparative purposes, and to make a conjecture about the potential impact this current study may have in audiology and in the health professions.

5.4.1 Within audiology

As discussed in Chapter 1, a thorough search within audiology’s peer-reviewed body of literature revealed a paucity of literature on reflection and reflective practice. The studies involving reflection summarized in Chapter 1 used reflection as a part of their studies of pedagogical approaches: journal writing to assess students’ learning about diversity (Chabon & Lee-Wilkerson, 2006), service learning as a way to improve active learning (Goldberg, et al., 2006), and an

action research project on interdisciplinary service learning involving some reflective tasks and tools (Munoz & Jeris, 2005).

This current work is the first known empirical study *focusing* on reflection in audiology. Thus, the contribution to the literature may be especially significant. Two relatively informal reflective practice contributions emerged in audiology over the course of my dissertation research (DePlacido, 2010; Ida Institute, 2009). The first of these, chronologically speaking, is a tool for reflective practice from an institute focusing on humanistic elements of audiology practice (Ida Institute, 2009). The second informal publication is a similar piece to my non-peer reviewed article (Ng, 2009); however, the article does not present reflective practice in a scholarly way but rather as an opinion piece (DePlacido, 2010). No references to the theoretical or empirical body of literature on reflection are provided in the article, which defines and applies reflective practice in the field of audiology. The article is related to the tool developed by the Ida Institute (2009) and links readers to the Ida Reflective Journal tool. Again, this current research study is the first known empirical study of reflection in audiology. Yet, given the status of the reflection literature in audiology, I believe that sharing the theoretical background of reflection and reflective practice is equally important to our field, in order to prevent a lack of value for the topic as scholarly and valuable. Further, the lack of non-generic qualitative research in audiology is also a reason that the careful and detailed exploration of appropriate methodologies for educational and social research in audiology is necessary.

Given the paucity of literature on the topic in audiology, I will draw on literature from other professions. This literature will allow me to better situate my findings in the health professional education field. Further, comparison to existing literature will facilitate assessment of the novel contribution of the current study.

5.4.2 Across health professions

In the context of physiotherapy, Wessel and Larin (2006) provided to students a reflective writing guide that consisted of probing questions, based on the same

guidelines by Williams (2000) used in my study. This particular study is cited because it studied health professional students, followed a similar developmental timeline as the study that I conducted as well as provided the same type of guidance for reflective writing. However, the authors of this study in physiotherapy were interested in rating the reflections as per the Williams (2000) guide for rating reflections. On a scale of Level 1 through 5 with 5 being the most advanced, a mean level of 2.02 for the first round of reflection was lower than the third round of reflection, rated a mean of 2.21. The authors also completed a content analysis of the written reflections. Four themes were identified after the first placement, in order of decreasing frequency: professional behaviours, awareness of learning, self-development and shift to client focus, and identification and analysis of ethical issues. After the third placement, students wrote about: importance of communication/interaction, ethical behaviours and issues, scope of practice and professional boundaries, and acknowledgement of learning process and need for lifelong learning.

The findings in the current study align with Wessel and Larin's (2006) findings, in terms of content shifting later in the students' education to focus more on ethical issues and professional issues (described as critical reflection, in my study) and acknowledgement of the learning process and importance of lifelong learning. I did not rate student reflection in my study, and so cannot offer a comparison to this element of the Wessel and Larin (2006) study.

A study by Bartlett et al. (2009), also in physiotherapy, studied students over time with written reflections submitted at multiple time-points. In this study of professional socialization, reflective writing pieces were collected at three time-points (junior, intermediate, and senior). Findings showed that at the junior stage, student reflections revealed much emotional content. At the intermediate stage, junior themes were expanded, with communication coming through more strongly. At the senior stage, students described deeper engagement with clients, appreciation for relationships with clients, and a movement from self-confidence to self-efficacy, realizing their competency.

Again, the Bartlett et al. (2009) findings with physiotherapy students are echoed in the current study with audiology students, with emotional self-care playing a role in the developed theory, though not only at the junior stage but throughout. The movement in the Bartlett et al. (2009) study toward a greater engagement and value for relationship-centered care was, to a smaller extent, seen in the current study, and movement toward self-efficacy was seen as a movement toward independence and even interdependence.

A systematic review briefly mentioned in Chapter 1, by Mann et al. (2009), reviewed empirical studies of reflection in nursing, medicine, and other health professions that were published from 1995-2005. Seventeen of the 29 reviewed studies used qualitative approaches to address their research questions. Mann et al. (2009) developed a series of questions and answers from their critical review of relevant studies, summarized in Table 5.

The findings are summarized to help demonstrate the relation of the current study findings with previous research albeit in other health professions. In relation to the first and second questions, audiology students, new practitioners and clinical faculty/supervisors involved in the study did engage in reflection as defined in the glossary. However, students did engage in reflection to varying degrees and depths and it is possible that those who chose not to participate placed less value on reflection. The nature of reflection is very much the heart of this study and is explained in the developed theory. Similar to the findings of previous work, reflection was related to learning, professional identity development, and critical thinking.

Table 5: Summary of results of critical review by Mann et al. (2009)

| Question | Findings |
|--|---|
| 1 Do practicing health professionals engage in reflective practice? | Physicians and nurses use reflection to inform practice, but it is not a unitary phenomenon within and across individuals. |
| 2 What is the nature of students' reflective thinking? | In studies exploring medical and health professional students, reflection was related to learning, professional identity development, and critical thinking. Students demonstrated different orientations and levels of reflection and observations about mature professionals seemed to apply to students. Across professionals and students, "deeper" levels of reflection are difficult to achieve. |
| 3 Can reflective thinking be assessed? | Yes, and measures of reflective thinking correlate to other measures in theoretically consistent ways. The authors posit that failure to assess reflection may imply a lack of value for reflection to learners. |
| 4 Can reflective thinking be developed? | Yes, in association with certain interventions and in relation to other aspects of learning and development. |
| 5 What contextual influences hinder or enable the development of reflection and reflective capability? | The most important elements of enabling development of reflection and reflective practice are: supportive environment both intellectually and emotionally, authentic context, accommodation for learning styles, mentoring, discussion, support, free expression of opinions as well as perceptions of relevance, positive prior experience, organizational climate including respect amongst professionals, and time for reflection. |
| 6 What are the potential positive or negative effects of promoting reflection? | Many benefits documented including improved understanding, transformed perspectives, deeper understandings, renewed appreciation and value for professions, with hypothesized negative effects of resentment, time commitment, limitations of a structured approach, concerns about reflection as a "fad" and as "busy work." |

Interestingly, in question 3, Mann et al. (2009) suggested that not assessing reflective thinking may imply and impose a lack of value for it to learners.

However, this is not necessarily supported by my experiences or in literature that documents possible concerns in the assessment of reflection (Boud & Walker, 1998; Stewart & Richardson, 2000; Sumsion & Fleet, 1996). As stated previously, it is possible to inspire and instill value (or lack of value) in ways that

may not seem overly explicit and deliberate. Thus, I posit that modeling and living one's philosophy of practice may be as or more effective as assigning and assessing activities to promote values. Perhaps this topic is an avenue for further study.

Questions 4 and 5 were certainly explored in the current study, with the developed theory in general agreement with the reviewed literature. Question 6 was not a focus of this study; however, one challenge that arose frequently in the data was that of time-constraints. Yet, overall, while students mentioned time constraints as a source of stress in early placements, they did not seem to view reflection as something they would not have time for, as they progressed in their development and increasingly saw its value. In fact, when probed about whether or not they would be able to find time to reflect, student participants were quite adamant that they would and clinician participants emphasized the critical need to engage reflection in practice.

5.5 Practical implications

5.5.1 Explicit applications

The grounded theory developed through this research process offers practically applicable understanding, with regard to the process of development that students experience as they move toward professional practice, and the role of reflection in this process. In terms of implications for audiology curricula, the following suggestions may be worth considering:

1. Explain what reflection and reflective practice are, providing practical examples, early on (prior to placement) to raise *awareness* and *enable value* for reflection.
2. Open up a safe space for dialogue – between faculty/supervisor and student, and amongst students.
3. Encourage multiple modes toward reflection (writing, group discussions, one-to-one dialogue).

4. Provide formative, probing feedback and critical companionship rather than or in addition to stringent, summative assessment.
5. Model the values for reflective practice, critical consciousness, and professional behaviours. Perhaps then, students may feel that these are important and worthwhile traits to strive toward – make the “hidden curriculum” (Hafferty & Franks, 1994) a positive one.

Regarding the first suggestion above, a workshop similar to (but improved upon) the one that I conducted with my participants could become a regular part of audiology curricula, to ensure an explicit space for consideration of an epistemology of practice. This recommendation was explicitly made by several student participants.

This workshop would in turn help with the second suggestion above, creating a value for dialogue. If faculty and supervisors were to “buy in” to the idea of dialogic adult education and an epistemology of practice, then they could exploit dialogue as a tool for students’ growth and development.

Next, because both students and clinical faculty/supervisors expressed a preference for explicit teaching without strict enforcement and over-structuring of reflective activities, a flexible approach to reflection that accounts for differences in learning styles may be ideal. Faculty and students noted differences in the nature of and preferences for the mode of reflective activity: through writing and journaling, more structured approaches, or dialogue. Students should be encouraged to try the different modes given the participants’ perceived differences in processes and outcomes across modes, yet also allowed to focus on exploring the mode that they gravitate toward if this will help open up their reflective thought. Practical challenges of this approach would arise if some students chose not to engage in such activities at all, as a result of the lack of mandating and structuring. Some students suggested that reflective activities should, in fact, be required. Yet, based on the developed theory, I perceive a need for flexibility in format and approach even if the activity is indeed required.

The issue of assessment of reflection is contentious, though Mann et al. (2009) suggested that it is in fact achievable, and that a lack thereof could imply a lack of value. Others (Boud & Walker, 1998; Stewart & Richardson, 2000; Sumsion & Fleet, 1996) are more concerned with issues that arise in reflection that may place students at unnecessary risk, as they expose vulnerabilities within the context of a power imbalance. That is, students may either feel they cannot share openly because their superiors are receiving and judging their reflection. Moreover, students may be placed in vulnerable circumstances without adequate support, if reflecting leads to emotional turmoil. Thus, if reflective activities are to be included in curricula, some ethical considerations around the “safety” of the student are needed.

Finally, the idea of modeling desired behaviours for students is one that was echoed across student and clinical faculty/supervisor participants. Although explicit teaching is necessary for students to have a language with which to represent their epistemology of practice, this explicit teaching would be in vain if the values for reflection and reflective practice were not pervasive in the actions of faculty, supervisors, and the underlying philosophy of the curriculum.

5.5.1.1 Inspire and foster as opposed to mandate and evaluate

Related to the above, this study’s findings suggest that some exposure to the theories of reflection and reflective practice, with an overview of concepts, their definitions, relevance and practical examples is helpful to “kick-start” the reflective development of students. Further, ongoing dialogue in the reflective vein may strengthen the benefits of reflection and reflective practice, and may in part overcome some of its limitations and dangers related to the problems with the distinct but at times conflated construct of self-assessment (Eva & Regehr, 2005).

However, the imposition of reflection requirements is unsettling, and not universally supported by the research literature. Rather, a dialogic adult education, bidirectional generosity (Frank, 2004; Freire, 2007; Nisker, 2006)

approach may be a better way to foster desirable traits in new practitioners. My own experiences in engaging students' imaginations in a climate of critical consciousness, community of practice, and lifelong learning, lead me to recommend the avoidance of an overly prescriptive, evaluative approach to inspiring reflection in audiology students. However, there is risk in attempting a dialogic adult education model (including the instructor's vulnerability) and I have experienced its time- and effort- intensive nature.

The avoidance of formal, stringent assessment of reflection does not preclude formative feedback provision and informal evaluation and promotion of growth. Moon (2004) suggests that assessment is absolutely necessary, with reflective writing enabling us to assess (albeit indirectly) experiential learning. I suggest that we view assessment not as a cumulative and static end-point, but rather as a formative and developmental process.

Even in a formative approach to guiding reflection, care must be taken not to suppress the organic nature of reflection. In fact, reducing the burden of reflection in already overwhelmed students has been shown to have positive effects on the content and depth of written reflections (McGarr & Moody, 2010)

An inherent challenge of the study is that my involvement may have in itself impacted the students' development. Several students expressed the effects that participation in the study had on their reflective capacities and were appreciative of what they viewed as a valuable learning experience. The following quotation, which actually led to theoretical sampling of clinical supervisors, comes from a student who reported that his supervisors wondered if this was the first time students had engaged in "this stuff," meaning an explicit focus on professional behaviours including critical thinking and reflective practice:

...she said something like she thought our class had a different way of thinking – and was this the first time we've done critic – this stuff? ... and she said our class, there's something different about the way they approach things and just it wasn't about themselves and she... she thought and I don't think she'd just say

this because I mean if she's tooting my horn that's one thing but she was talking about the other students as well and she thought maybe part of it was that I had a different point of view as well cuz I'd been in a clinic and it wasn't just strictly these textbooks it was I had I knew patients going into school so ... (1006-2-interview).

Similarly, clinical faculty/supervisor wondered if there was any difference in students who chose to participate in the study versus those that did not, in terms of their reflective capacities:

In terms of the students you know I don't know which student have participated with you and it would be interesting to know in terms of what I was getting um if there was any difference in what they were giving me compared to a student who wasn't participating (2002-2-interview).

As demonstrated in the opening reflexivity note about my most recent positive teaching experiences early in Chapter 5, I am of the belief that it is possible to inspire and foster desirable traits in students and new practitioners without requiring and contracting these behaviours. I also believe that the contracting of such behaviours can take away their very organic essence. In fact, one clinician participant echoed this concern when we began to discuss how reflective practice could be emphasized in our profession, without a regulatory mandate.

... I feel I have that skillset and I guess with the students what I hope I'm doing in those kinds of processes is setting goals and so on is teaching them to look forward and to to move in that way. I guess I feel partly that I shouldn't have to be monitored in order to do that and I know I can look back in audiology and we can see people who've been in audiology for years and they're still at the level they were at when they graduated so I can see the need for that and yet um I don't know...

Researcher: but will forcing people like that to do it even help them?

it doesn't, exactly I don't know that it does right and I you know for me I find that sort of hard to define in all the thing that I'm doing and maybe it's cuz of the job I'm in but I'm constantly reviewing things and you know I don't always write it down and it's oh my gosh I've done all this work and you know it feels like a lot of work to prepare those things um and yet [regulated reflection is] not something that I feel um motivates me to learn or to do anything it's just something I have to do (2002-2-interview).

This type of concern over mandatory reflection has also been expressed by Mann et al. (2009), in that the requirement may be seen as a “make-work” task , thus taking away from the potential to increase value for reflection in the workplace.

5.5.1.2 Joint supervisor-student journals

One practical suggestion that came through in the data was that of joint supervisor-student journals. One student mentioned the benefits of a joint journal in which she wrote daily with periodic feedback from her supervisor. Another student mentioned reflective emails that he sent to his supervisor at the end of each day, which they would then discuss at the start of the next day. Two clinical faculty also discussed the benefits of receiving regular student reflections in a written format. Several students mentioned the continued use of journaling and reflective practice as goals for their development as new practitioners, and down the road as lifelong learners.

Given the importance of critical companionship, of clinical faculty/supervisor guidance, and of dialogue and feedback, one proposition would be to offer the option of a journal shared between student and supervisor, perhaps without quantity or deadline requirements, but rather an open-ended, safe space for bidirectional dialogue. Again, a trusting space would need to be established for this journal to be effective as a place for emotional and experiential, and not only technical and procedural learning, to develop.

5.5.2 Implicit impact

This research may be impactful beyond audiology, because creative, rigorous, empirical, longitudinal literature on reflection and reflective practice are needed across professions (Mann, et al., 2009). Based on the empirical reflection literature across health professions, questions that still require further study have been suggested including (Mann, et al., 2009):

1. Does reflection enhance learning?
2. Does reflection improve self-understanding?
3. Is reflection most effective when shared?
4. What is the role of reflection-in-action?
5. Does reflection enhance self-assessment?
6. Does reflection alter clinical behaviour?
7. Does reflection improve patient care?
8. Can reflective practice be taught and learned?, and
9. Are there negative effects of reflection?

The current study does not address these questions in the manner in which they are posed, as these questions are more suited to quantitative approaches because they are posed from a post-positivist position seeking answers as generalisable truths. However, this study does indirectly address questions 1 through 5, and question 8 in terms of exploring these relationships and processes in an interpretive way. Specifically, this grounded theory explains: 1) as understood through reflection, the journey from student to new professional practitioner; 2) the window opened up to faculty, supervisors and other guides when students share their reflections; 3) the usefulness of reflection to students in their journey from student to practitioner; and 4) the ways in which reflection is developed. Within these broad categories, there is inferable theoretical content to at least in part respond to questions 1 through 6, and question 8. This theory did not include explanation relating to improved patient care or negative effects of reflection, as no participants reported negative effects of reflection. The

challenge of having enough time to reflect did come up as a surmountable challenge related to reflection.

These implicit implications for the important questions about reflection and its role and impact in educating health professionals and improving patient outcomes are seen as a starting point. Findings from this study in the form of the developed theory are of potential use to informing future research that more directly addresses the questions posed by Mann et al. (2009).

5.6 Quality of the theory

The quality criteria outlined in Chapter 3 will now be used to assist the reader in assessing the quality of this study and the developed grounded theory. Strengths and limitations of the study are discussed in the following section.

5.6.1.1 Credibility

Multiple sources of data are thought to enrich the data gathered, and credibility and quality of a grounded theory are not achievable without rich data (Charmaz, 2006). The multiple sources of data used in this study were chosen both *a priori* and emergently as dictated by theoretical sampling.

The analysis process has been outlined in Chapter 3, including the approach used for coding and diagramming (Appendix F), which was a means to sort memos and begin to integrate focused codes, creating theoretical codes and leading to the development of the theory. The reader may further assess the credibility of the analysis process by judging the fit of direct participant quotations to the associated theoretical claim.

Reflexivity also enhances credibility by exposing the researcher's assumptions and thought processes that may have impacted and influenced the interpretations of data. In Chapters 1 and 2, I have attempted to be transparent about my assumptions and the experiences that informed my knowledge and research conduct. The reader may then use these shared reflections to consider

whether my reflexivity has been appropriately acknowledged and considered in the interpretation of the data.

5.6.1.2 Originality

Charmaz (2006) suggests that a grounded theory should offer new, fresh insights and socially and theoretically significant, challenging, extending or refining current ideas, concepts and practices. Throughout this chapter, theoretical and practical contributions have been discussed, highlighting the originality and potential for original impact of this work. Further, within audiology, this is the only known empirical study of reflection and reflective practice. Outside of audiology, this is one of a handful of studies that followed students' reflection over time and the only study found in the literature that followed students' reflection from early on in their education into their early months as professional practitioners. The contribution and comparison to existing literature is included within this chapter.

5.6.1.3 Resonance

Resonance of the developing concepts and categories with participants was determined during Time-point 2 and 3 interviews, when developing theoretical insights were shared with participants for expansion or even refutation.

Participants in all cases responded to developing concepts and categories with strong agreement, indicating resonance with participants. Further, following initial coding of each time-point's dataset, I consulted with my two doctoral supervisors, who have conducted similar work in physical therapy (Bartlett, et al., 2009).

Resonance was also found with my supervisors, from their perspective as experienced educators of physiotherapy students. As the reader reads this manuscript, s/he may think about which elements of the theory resonate or do not resonate with his/her experiences. Quotations were chosen carefully as a way to demonstrate credibility in the theoretical claims. Resonance of the quotations with the theoretical claims is another consideration for the reader.

5.6.1.4 Usefulness

In terms of usefulness, early conceptual development informed my teaching experiences, which were discussed in Section 5.1. Generic processes such as emotional self-care, professional socialization, and working through challenging experiences were suggested. Tacit implications of reflective processes are difficult to quantify. Yet, there is a basic utility of the theory in increasing our understanding of reflection, reflective practice, and professional development and socialization within the context of audiology students' journeys toward professional practice. The theoretical contribution and implications discussed in this chapter further attest to the usefulness of this grounded theory.

5.6.1.5 Aesthetics of the writing

Charmaz (2006) suggests that in addition to the above four main criteria for evaluation of the quality of a grounded theory, the aesthetic principles and rhetorical devices of intuitive, inventive, interpretive writing can enable a grounded theory to spread its influence to even larger audiences. Attempts were made in the current study to engage in a way of writing that would bring to life the experiences of the participants despite the abstract nature of the developed theory. To this end, I used metaphor and a narrative writing style to help the reader gain a rich understanding of the data from which the theory was derived, despite the minimal snapshot view of quotations.

A review of the definition of grounded theory that served as the touchstone for this constructivist grounded theory process is included here, for consideration in the following discussion of strengths and limitations:

Grounded theory is an abstract conceptualization that helps us understand the studied phenomenon by demonstrating patterns, connections, and interactions. The act of theorizing is a subjective practice; thus, a theory may prove to have explanatory or predictive power beyond its substantive topic area yet be inextricably tied to the world from which it was derived. That is, theory, even when grounded in data, is subject to interpretation and this is acknowledged from

the outset of its construction, yet not viewed as preclusive of impact beyond the substantive area.

5.7 Strengths and limitations

5.7.1 Strengths

5.7.1.1 Reflective writing, reflective thinking, and reflective dialogue

Reflection in this study occurred through reflective writing, reflective thinking, and oral dialogue. One of the strengths of this study was that multiple avenues to reflection were available to participants. Writing, dialogue, and goal-setting (serving as anticipatory reflection) were available to students as ways in which to reflect. Further, this study elicited reflection upon reflection. That is, in reflective writing, and in interviewing, one may engage in reflection-on-action about reflection-in-action. Further, the act of writing itself may involve some reflection-in-action. Participants would often note their preferred way of reflecting, with many acknowledging the enrichment of having multiple approaches. Thus, the provision of multiple ways to reflect is thought to be a strength of this study, as it allowed individuals to express their reflective capacities in a way that they felt comfortable, and pushed others to reflect, think and grow in new way.

5.7.1.2 Longitudinal nature

The current study was longitudinal in nature, with students followed over time. The two studies mentioned in physiotherapy (Bartlett, et al., 2009; Wessel & Larin, 2006) also used this type of approach, following students over time. This element of the study is thought to be a strength, because it allows for not only a developmental look at reflection, but also a look at the development of students as professional practitioners. Four students submitted written reflections and two provided interviews after two to four months of practice as audiologists. This view into the early months of practice is also considered a strength as it is a novel contribution to the literature and enables the study of students' development as professional practitioners, and not only as students.

5.7.2 Limitations

5.7.2.1 Participation versus non-participation, and participant attrition

One limitation of this study was unavoidable because participants were given the choice to participate and option to withdraw at any time. Thus, the data included in this study were provided only by those who made the conscious decision to participate. This decision was likely influenced by students' perceptions of and value for the study, for reflection and reflective practice, and by their availability to give to such an effort.

Also, it was difficult to obtain written reflections from students who were geographically dispersed and with whom I had only an arms-length, research relationship. Compensation was provided as a token of appreciation and ongoing e-mail reminders and the second reflective practice workshop were also used as attempts to prevent attrition.

Although participation dropped off with subsequent data collection time-points, the theory was not compromised, with theoretical sufficiency believed to be reached across the theory. In reality, the original *a priori* plan for all-encompassing collection of data from all initial sample participants at all time-points was unnecessary for the development of the theory, since theoretical sufficiency was reached. Although the knowledge generated in this constructivist work is situated and tied closely to the experience of the voices represented, the abstraction of a theory from the data is thought to have the potential to reach beyond the specific participants.

5.7.2.2 Limitations of elicited reflection

The method of eliciting reflection used in this study (Appendix B) subscribed to a guided, reflection-on-action approach (Johns, 2002) rather than a reflection-in-action (Schön, 1987) approach. However, reflection-on-action can reveal processes of anticipatory reflection and reflection-in-action. Guided written reflection served the purposes of the current study but has been questioned in its

ability to capture a student's honest reflection, when revealing such information may be perceived to have effects on evaluation and progression in the training program (Boud & Walker, 1998). As the facilitator of these reflections, I was not in an evaluative position in relation to these students, as I requested that I not be placed in teaching positions with my participant cohort. I informed students that their reflections would be ungraded and were not a part of their performance evaluation. These steps were seen to address some concerns surrounding a power differential and openness to reflection. However, my role as a practicing audiologist, a doctoral student, and an instructor and teaching assistant for other cohorts of the audiology and speech-language pathology programs may still have placed me in a perceived position of power to some students. Further, by necessitating an arms-length distance from participants, this cohort may have been less inclined to trust me and to feel committed to the study, which may in turn have resulted in participant withdrawal, attrition, and reduced engagement by some student participants.

5.8 Reflections on the research journey

This study served as my introduction to conducting qualitative research. Upon beginning the constructivist grounded theory research process, I felt confident that I understood the various methods and components of grounded theory. However, I could not envision how the process would actually unfold. Specifically, I wondered how I would really move from codes through to memos and then the developed theory. I also wondered if I would have enough data to generate insights.

Once Time-point 1 of reflective writing analysis was underway, I began to understand that the coding process occurs very naturally, because it begins so closely and literally tied to the data. As I realized that codes were repeated within and across data sources, the more abstract coding also seemed to happen easily. It was at this point that I noted, in my reflexive journaling "I can see why some grounded theorists, especially those in the Glaserian school of thought, would posit that the 'data speak for themselves' and that the theory *emerges*

rather than is developed by the researcher.” Certainly, it “felt” as though the theory emerged on its own, without my interpretation. However, in my constructivist reflexive journaling I regularly noted the way my lens may be impacting the way I “saw” the data. This experience runs in parallel to Schön’s (1983, 1987) notion of different professionals framing situations differently, thus finding different problems within the same scenario.

In the writing process, interestingly, the results section seemed to “write itself.” Charmaz (2006) suggests that if the memo writing process is conducted carefully, that they serve as the step prior to writing the theory. This observation proved to be true for me; the memo writing in combination with diagramming and sorting ultimately created the framework for Chapter 4.

I was also convinced of the iterative process that is described in the grounded theory texts. Again, in preparing to conduct the research, I read across schools of grounded theory, that grounded theory is an iterative process. The constant comparative method is often cited in qualitative literature; however, until I experienced it, I did not fully understand it.

The longitudinal nature of my study was a design requirement that I feel also enabled me to experience grounded theory at its iterative best. That is, in a time-constrained grounded theory such as any thesis project, the practical need for scheduling of participants back-to-back may result in missing the step of theoretical sampling and gathering data based on previous data. Because my data collection was spread apart over the course of the student participants’ education and into their early months of practice, I was able to make use of theoretical sampling based on existing data, and was also able to return to the previous data after further data was collected. In this way, I feel that I strongly followed the grounded theory core method of constant comparative analysis, moving between data collection, analysis, writing, and theoretical sampling in a constantly iterative way.

I return to three important goals for constructivist grounded theory, as previously mentioned in Section 2.5.3. A constructivist grounded theorist should strive for: 1) a reciprocal relationship between participant and researcher, who construct meaning with the researcher ultimately developing a theory grounded in the experiences of both; 2) establishment of a balanced relationship between researcher and participant, with explicit attempts to mediate inherent power imbalances; 3) clear positioning of author's role in the text, and the influence of literature review and how participants' stories grew into theory through the writing process (Mills, et al., 2006). In this chapter and in Chapter 3, I have attempted to demonstrate my explicit attempts to achieve the three goals stated above.

5.9 Conclusion: A representation of complexity

Regehr (2010) has suggested that in health professions education, we need to refocus our imperative of proof to one of representing complexity. Regehr (2010) cautions that if we apply the biomedical, experimental research approaches to education research, we may mistakenly attempt to apply generalisable solutions to complex, context-specific situations (previously discussed in Ng, Accepted Jan 17, 2011). In fact, Regehr (2010) posits that "competence does not exist in the individual, but in the individual's interaction with the constantly evolving context in which he or she is practicing [...] the science of education is not about creating and sharing better generalisable solutions to common problems, but about creating and sharing better ways of thinking about the problems we face" (p. 37).

In this line of thinking, the RESPoND grounded theory that this research has developed serves the purpose of creating and sharing better ways of thinking about how students develop as professional practitioners and the role of reflection in this process. This representation of a complex interaction of processes is novel to the field and informative to health professional education as one example, one theory, from which others may learn.

The constructivist grounded theory methodology used in this study offered a path to a rich understanding and explanation of processes that would otherwise be

difficult to explain, with a representation of the complexity and personal nature of the processes. Grounded theory offers potential to audiology's other non-technical research areas, such as understanding patient journeys, and the client/patient-clinician relationship (Ng, Accepted Jan 17, 2011). This study may thus have impact in terms of demonstrating the potential for non-generic qualitative research in the field of audiology.

Implications, in the form of inspiring new ways of thinking and new research questions, may extend beyond the student population given that learning, reflection and professional development are processes that students, new practitioners and experienced practitioners share. This substantive theory about the use of reflection by students as they develop as professional practitioners may help inform audiology curricula development, regulatory body requirements and perhaps even continuing education, continuing competency, and professional development activities. The theory may also be considered in terms of its relation to general processes of professional knowledge and development, across professions.

5.9.1 A look ahead

In the early design of this study, I had not attended significantly to the emerging literature on embodied reflection (Kinsella, 2007b). In the discourse of this work, I struggled between the meanings of "doing reflection" and "being reflective." I have a personal preference for the notion of *being* a reflective practitioner, with enactment of the tenets of reflective practice, as opposed to *doing* reflective practice in a checklist manner. Substantively, in the developed theory, it also appears that the essence of reflection is one that is tacit and embodied more often than consciously and explicitly enacted, although a deliberate and explicit extraction of the tacit and embodied elements of reflection was used here methodologically. In a future study, designing reflective activities and interview guides to elicit the embodied nature of reflection could be particularly interesting and important.

For the future, this research offers a potential springboard for numerous possible research paths. First and foremost, would be to follow the same cohort as they develop into more experienced, and possibly expert practitioners. Second, a comparison across other cohorts and/or professions could allow for a formalization of the substantive theory developed in this work. Third, a missing piece in this work was to add / address the patient perspective to the theory of reflection and reflective practice as it relates to professional development. The patient voice is certainly missing from this theory.

Finally, although divergent from the philosophy of this work, an emerging question regarding the benefit of reflection to patient outcome (Mamede, Schmidt, & Penaforte, 2008) exists as an “elephant in the room.” Creative methodological approaches could perhaps begin to address this question in order to strengthen both the theoretical understandings of reflection and the practical implications of reflective practice.

I view this project as a starting point, a substantive theory from which to build further theory. I also see this body of work as an opportunity for educators of future audiologists and other health professionals to better understand the process of development from student to professional and beyond and the importance of the experiential and personal learning so valuable to this journey. However, I do not mean to emphasize reflective practice in replacement of technical rationality or evidence-based practice. Rather, this work and the developed grounded theory may raise awareness and illuminate the potential for a balancing act. In Schön’s (1983) fitting words:

The dilemma of rigor or relevance may be dissolved if we can develop an epistemology of practice which places technical problem solving within a broader context of reflective inquiry, shows how reflection-in-action may be rigorous in its own right, and links the art of practice in uncertainty and uniqueness to the scientist’s art of research. We may thereby increase the legitimacy of reflection-in-action and encourage its broader, deeper, and more rigorous use (p. 69).

Epilogue

This document does not contain a static body of knowledge. Rather, the grounded theory is contextually shaped and the personal knowledge* shared through written reflection is a snapshot representation of one moment in a dynamic and ever-changing sea of knowledge. Even the empirical literature explored in this document will ultimately be dated and will possibly lose relevance. The theoretical content of this document stemming from great thinkers is perhaps more timeless. But at the conclusion of this document, I can already see other ways of framing, shaping, and sharing this knowledge. As Ann Oakley states, “A way of seeing, is a way of not seeing.” The substantive data could be subjected to further re-interpretation, and this constant hermeneutic relationship with the extant theory and the substantive theory developed here could provide endless (re)accounts of the “same” phenomena. This, then, is merely one piece of a large puzzle. My hope is that it is one small contribution to a multitude of bigger pictures.

A way of seeing is a way of not seeing.

~ Ann Oakley

*As I shared personal knowledge in the form of reflective and reflexive vignettes throughout this work, I realized how much my personal knowledge, the lens through which I interpreted the data, was directly shaped by the research experience (and data) itself. My interpretive lens was made up of knowledge and assumptions from multiple lenses including relevant literature and my experiences. Yet, this lens was immersed in a symbiotic relationship with the research process and the data itself. The language that I began to use in my teaching, reflexive journaling and reflective writing in general, took on the language of the research in which I was engaged. The multi-directional push-pull relationship of my practice, teaching, research, and personal life is undeniable, and the constructivist methodology that I worked within not only allowed me to fully engage this multi-directional relationship, but I believe, required me to do so.

References

- Adams, K., & Sturgis, P. (2006). Investigating the factors influencing professional identity of first-year health and social care students. *Learning in Health and Social Care, 5*(2), 55-68.
- Annells, M. (1996). Grounded theory method: Philosophical perspectives, paradigm of inquiry, and postmodernism. *Qualitative Health Research, 6*(3), 379-393.
- Argyris, C., & Schön, D. (1992). *Theory in practice: Increasing professional effectiveness* (originally published in 1974 ed.). San Francisco, CA: Jossey-Bass.
- Atkins, S., & Murphy, K. (1993). Reflection: A review of the literature. *Journal of Advanced Nursing, 18*, 1188-1192.
- Avis, M., & Freshwater, D. (2006). Evidence for practice, epistemology, and critical reflection. *Nursing Philosophy, 7*(4), 216-224.
- Backman, K., & Kyngas, H. (1999). Challenges of the grounded theory approach to a novice researcher. *Nursing and Health Sciences, 1*, 147-153.
- Bannigan, K., & Moores, A. (2009). A model of professional thinking: Integrating reflective practice and evidence based practice *Canadian Journal of Occupational Therapy, 76*(5), 342-350.
- Bartlett, D. J., Lucy, S. D., & Bisbee, L. (2006). Item generation and pilot testing of the comprehensive professional behaviours development log. *Journal of Allied Health, 35*(2), 89-93.
- Bartlett, D. J., Lucy, S. D., Bisbee, L., & Conti-Becker, A. (2009). Understanding professional socialization of Canadian physical therapy students: A qualitative investigation. *Physiotherapy Canada, 61*(1), 15-25.
- Benner, P. (1984). *From novice to expert: Excellence and power in clinical nursing practice*. Menlo Park, CA: Addison-Wesley.
- Berg, A. L., Canellas, M., Salbod, S., & Velayo, R. (2008). Exposure to disability and hearing loss narratives in undergraduate audiology curriculum. *American Journal of Audiology, 17*, 123-128.
- Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. Berkeley: University of California Press.
- Bolton, G. (2005). *Reflective practice: Writing and professional development*. London, UK: SAGE.

- Boud, D., & Walker, D. (1998). Promoting reflection in professional courses: The challenge of context. *Studies in Higher Education*, 23(2), 191-206.
- Bowen, G. A. (2006). Grounded theory and sensitizing concepts. *International Journal of Qualitative Methods*, 5(3), Article 2. Retrieved from http://www.ualberta.ca/~iiqm/backissues/5_3/PDF/bowen.pdf
- Boychuk Duchscher, J. E., & Morgan, D. (2004). Grounded theory: Reflections on the emergence vs. forcing debate. *Journal of Advanced Nursing*, 48, 605-612.
- Brookfield, S. (1988). *Training educators of adults: The theory and practice of graduate adult education*. New York, NY: Routledge.
- Brookfield, S. (1998). Critically reflective practice. *Journal of Continuing Education in the Health Professions*, 18(4), 197-205.
- Bryant, A., & Charmaz, K. (2007a). Grounded theory in historical perspective: An epistemological account. In A. Bryant & K. Charmaz (Eds.), *The SAGE handbook of grounded theory* (pp. 31-57). Thousand Oaks, CA: SAGE.
- Bryant, A., & Charmaz, K. (2007b). Grounded theory research: Methods and practices. In A. Bryant & K. Charmaz (Eds.), *The SAGE handbook of grounded theory* (pp. 1-28). Thousand Oaks, CA: SAGE.
- Carr, W., & Kemmis, S. (1986). *Becoming critical: Education, knowledge and action research*. Geelong, Victoria: Deakin University Press.
- Chabon, S. S., & Lee-Wilkerson, D. (2006). Use of journal writing in the assessment of CSD students' learning about diversity: A method worthy of reflection. *Communication Disorders Quarterly*, 27(3), 146-158.
- Charmaz, K. (2004). Premises, principles, and practices in qualitative research: Revisiting the foundations. *Qualitative Health Research*, 14(7), 976-993.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London, UK: Sage Publications, Inc.
- College of Physiotherapists of Ontario. (2008). Professional portfolio guide. Retrieved from <http://www.collegept.org/>
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Los Angeles, CA: Sage Publications, Inc.
- Cox, R. M. (2005). Evidence-based practice in audiology. [Special Issue]. *Journal of the American Academy of Audiology*, 16(7), 408-409.

- Crotty, M. (1998). *The foundations of social research*. London, UK: SAGE
- Cunliffe, A. L. (2002). Reflexive dialogical practice in management learning. *Management Learning*, 33(1), 35-61.
- Deplacido, C. (2010). Reflective practice in audiology. *Hearing Review*, 17(2), 20-25.
- Dewey, J. (1910). *How we think*. Mineola, NY: Dover Publications Inc.
- Dewey, J. (1929). *The quest for certainty*. New York, NY: G.P. Putnam.
- Dewey, J. (1938). *Experience and education*. New York, NY: Touchstone.
- Dewey, J. (1974). *John Dewey on education: Selected writings*. Chicago, IL: University of Chicago Press.
- Dey, I. (1999). *Grounding grounded theory: Guidelines for qualitative inquiry*. San Diego, CA: Academic Press.
- Dollaghan, C. A. (2007). *The handbook for evidence-based practice in communication disorders*. Baltimore, MD: Paul H. Brookes Publishing Co.
- Doyle, L. W., & Freeman, B. A. (2002). Professionalism and the audiology student: Characteristics of master's versus doctoral degree students. *Journal of the American Academy of Audiology*, 13, 121-131.
- Draucker, C. B., Martsof, D. S., Ratchneewan, R., & Rusk, T. B. (2007). Theoretical sampling and category development in grounded theory. *Qualitative Health Research*, 17, 1137-1148.
- Du Toit, D. (1995). A sociological analysis of the extent and influence of professional socialization on the development of a nursing identity among nursing students at two universities in Brisbane, Australia. *Journal of Advanced Nursing*, 21, 164-171.
- Elias, J. L., & Merriam, S. B. (2005). *Philosophical foundations of adult education* (3rd ed.). Malabar, FL: Krieger Publishing Company.
- Epstien, I. (2009). Promoting harmony where there is commonly conflict: Evidence-informed practice as an integrative strategy. *Social Work in Health Care*, 48(3), 216-231.
- Eraut, M. (1994). *Developing professional knowledge and competence*. New York, NY: Routledge Falmer.
- Eraut, M. (1995). Schön shock: A case for reframing reflection-in-action? *Teachers and Teaching: Theory and Practice*, 1(1), 9-22.

- Eva, K. W., & Regehr, G. (2005). Self-assessment in the health professions: A reformulation and research agenda. *Academic Medicine*, 80(10 Suppl.), S46 – S54. .
- Eva, K. W., & Regehr, G. (2008). "I'll never play professional football" and other fallacies of self-assessment. *Journal of Continuing Education in the Health Professions*, 28(1), 14-19.
- Flaming, D. (2001). Using phronesis instead of 'research-based practice' as the guiding light for nursing practice. *Nursing Philosophy*, 2, 251-258.
- Flanagan, J. (1953). The critical incident technique. *Psychological Bulletin*, 51, 327-358.
- Flyvbjerg, B. (2001). *Making social science matter*. New York, NY: Cambridge University Press.
- Frank, A. W. (2004). *The renewal of generosity: Illness, medicine, and how to live*. Chicago, IL: The University of Chicago Press.
- Freire, P. (2007). *Pedagogy of the oppressed* (M. Bergman Ramos, Trans. originally published in 1970, 30th Anniversary ed.). New York, NY: Continuum.
- Gerhardt, U. (2000). Ambivalent interactionist: Anselm Strauss and the "schools" of Chicago sociology. *The American Sociologist*, 31(4), 34-64.
- Glaser, B. G. (2002a). Conceptualization: On theory and theorizing using grounded theory. *International Journal of Qualitative Methods*, 1(2). Retrieved from <http://www.ualberta.ca/~ijqm/>
- Glaser, B. G. (2002b). Constructivist grounded theory? *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 3(3), Art. 12 Retrieved from <http://www.qualitative-research.net/index.php/fqs/article/view/825/1792>
- Glaser, B. G. (2007). Doing formal theory. In K. Charmaz & A. Bryant (Eds.), *The SAGE handbook of grounded theory* (pp. 98-113). Thousand Oaks, CA: Sage Publications, Inc.
- Glaser, B. G., & Holton, J. (2004). Remodeling grounded theory. *The Grounded Theory Review*, 4(1), 1-24.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New Brunswick, NJ: Aldine Transaction.

- Goldberg, L. R., McCormick Richburg, C., & Wood, L. A. (2006). Active learning through service-learning. *Communication Disorders Quarterly*, 27(3), 131-145.
- Goodman, N. (1978). *Ways of worldmaking*. Hassox, Sussex, UK: The Harvester Press Ltd.
- Gravel, J. S. (2004). *Evidence-based practice in pediatric audiology*. Paper presented at the A Sound Foundation Through Early Amplification Conference, Chicago, IL.
- Greenberger, E., Lessard, J., Chen, C., & Farruggia, S. P. (2008). Self-entitled college students: Contributions of personality, parenting, and motivational factors. *Journal of Youth and Adolescence*, 37(10), 1193-1204.
- Gross Forneris, S., & Peden-Mcalpine, C. (2006). Evaluation of a reflective learning intervention to improve critical thinking in novice nurses. *Journal of Advanced Nursing*, 57(4), 410-421.
- Habermas, J. (1971). *Knowledge and human interests: A general perspective*. Boston, MA: Beacon Press.
- Hafferty, F. W., & Franks, R. (1994). The hidden curriculum, ethics teaching, and the structure of medical education. *Academic Medicine*, 69(11), 861-871.
- Hatton, N., & Smith, D. (1995). Reflection in teacher education - towards definition and implementation. *Teaching and Teacher Education*, 11(1), 33-49.
- Higgs, J., Andresen, L., & Fish, D. (2004). Practice knowledge - its nature, sources and context. In J. Higgs, B. Richardson & M. Abrandt Dahlgren (Eds.), *Developing practice knowledge for health professionals* (pp. 51-69). London, UK: Elsevier Science.
- Higgs, J., & Titchen, A. (2001). *Practice knowledge and expertise in the health professions*. Oxford: Butterworth-Heinemann.
- Hood, J. C. (2007). Orthodoxy vs. power: The defining traits of grounded theory. In A. Bryant & K. Charmaz (Eds.), *The SAGE handbook of grounded theory*. Thousand Oaks, CA: SAGE.
- Ida Institute. (2009). Reflective journal Retrieved May 1, 2011, from <http://www.idainstitute.com>
- Johns, C. (1984). Guided reflection. In A. Palmer, S. Burns & C. Bulman (Eds.), *Reflective practice in nursing: The growth of the professional practitioner*. Oxford, UK: Blackwell Science.

- Johns, C. (2002). *Guided reflection: Advancing practice* Oxford, UK: Blackwell Science.
- Kelle, U. (2005). "Emergence" vs. "forcing" of empirical data? A crucial problem of "grounded theory" reconsidered. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 6(2), Art. 27. Retrieved from <http://nbn-resolving.de/urn:nbn:de:0114-fqs0502275>
- Kelle, U. (2008). The development of categories: Different approaches in grounded theory. In A. Bryant & K. Charmaz (Eds.), *The SAGE handbook of grounded theory* (pp. 191-213). Los Angeles, CA: SAGE.
- Kemmis, S. (2005). Knowing practice: Searching for saliences. *Pedagogy, Culture and Society*, 13(3), 391 - 426.
- Kennedy, T. J. T., & Lingard, L. A. (2006). Making sense of grounded theory in medical education. *Medical Education*, 40, 101-108.
- King, G., Bartlett, D. J., Currie, M., Gilpin, M., Baxter, D., Willoughby, C., et al. (2007). The development of expertise in pediatric rehabilitation therapists: Changes in approach, self-knowledge, and use of enabling and customizing strategies. *Developmental Neurorehabilitation*, 10(3), 223-240.
- Kinsella, E. A. (2000). *Professional development and reflective practice: Strategies for learning through professional experience, a workbook for practitioners*. Ottawa, ON: Canadian Association of Occupational Therapists.
- Kinsella, E. A. (2001). Reflections on reflective practice. *Canadian Journal of Occupational Therapy*, 68(3), 195-198.
- Kinsella, E. A. (2006a). Constructivist underpinnings in Schön's theory of reflective practice. *Reflective Practice*, 7(3), 277-286.
- Kinsella, E. A. (2006b). Poetic resistance: Juxtaposing personal and professional discursive constructions in a practice context. *Journal of the Canadian Association for Curriculum Studies*, 4(1), 35-49.
- Kinsella, E. A. (2007a, August 2008). Advanced topics in reflective practice. *Online preceptor education program: Preparing partners of learning in the field* Retrieved April 1, 2010, from www.preceptor.ca/index.html
- Kinsella, E. A. (2007b). Embodied reflection and the epistemology of reflective practice. *Journal of Philosophy of Education*, 41(3), 395 - 409.

- Kinsella, E. A. (2007c). Technical rationality in Schön's reflective practice: Dichotomous or non-dualistic epistemological position. *Nursing Philosophy*, 8(2), 102-113.
- Kinsella, E. A. (2009). Professional knowledge and the epistemology of reflective practice. *Nursing Philosophy*, 11, 3-14.
- Kinsella, E. A., & Jenkins, K. (2007, August 2008). Fostering reflective practice. *On-line preceptor education program: Preparing partners of learning in the field* Retrieved April 1, 2010, from www.preceptor.ca/index.html
- Kolb, D. (1984). *Experiential learning as the science of learning and development*. Englewood Cliffs, NJ: Prentice Hall.
- Kuhn, T. S. (1962). *The structure of scientific revolutions* (2nd ed.). Chicago, IL: University Press.
- Kumagai, A. K., & Lyson, M. L. (2009). Beyond cultural competence: Consciousness, social justice, and multicultural education. *Academic Medicine*, 84(6), 782-787.
- Lewis, J. D. (1976). The classic American pragmatists as forerunners to symbolic interactionism. *The Sociological Quarterly*, 17(3), 347-359.
- Lippman, S., Bulanda, R. E., & Wagenaar, T. C. (2009). Student entitlement: Issues and strategies for confronting entitlement in the classroom and beyond. *College Teaching*, 57(4), 197-204.
- Mamede, S., Schmidt, H. G., & Penaforte, J. C. (2008). Effects of reflective practice on the accuracy of medical diagnoses. *Medical Education*, 42, 468-475.
- Mann, K., Gordon, J., & Macleod, A. (2009). Reflection and reflective practice in health professions education: A systematic review. *Advances in Health Sciences Education*, 14(4), 595-621.
- Mantzoukas, S. (2007). Redescribing reflective practice and evidence-based practice discourses. *International Journal of Nursing Practice*, 14, 129-134.
- Mantzoukas, S. (2008). A review of evidence-based practice, nursing research and reflection: Leveling the hierarchy. *Journal of Clinical Nursing*, 17, 214-223.
- Maytum, J., Heiman, M. B., & Garwick, A. (2004). Compassion fatigue and burnout in nurses who work with children with chronic conditions and their families. *Journal of Pediatric Health Care*, 18, 171-179.

- McGarr, O., & Moody, J. (2010). Scaffolding or stifling? The influence of journal requirements on students' engagement in reflective practice. *Reflective Practice, 11*(5), 579-591.
- Mead, G. H. (1956). *On social psychology: Selected papers*. Chicago, IL: Open Court.
- Mezirow, J. (1990). *Fostering critical reflection in adulthood: A guide to transformative and emancipatory learning*. San Francisco, CA: Jossey Bass.
- Mills, J., Bonner, A., & Francis, K. (2006). Adopting a constructivist approach to grounded theory: Implications for research design. *International Journal of Nursing Practice, 12*, 8-13.
- Mills, J., Chapman, Y., Bonner, A., & Francis, K. (2007). Grounded theory: A methodological spiral from positivism to postmodernism. *Journal of Advanced Nursing, 58*, 72-79.
- Moodie, S., Johnson, A., & Scollie, S. (2008). Evidence-based practice and Canadian audiology. *Canadian Hearing Report, 3*(1), 12-14.
- Moon, J. A. (1999). *Reflection in learning and professional development: Theory and practice*. New York, NY: Routledge.
- Moon, J. A. (2004). *A handbook of reflective and experiential learning: Theory and practice*. New York, NY: Routledge.
- Mooney, M. (2007). Professional socialization: The key to survival as a newly qualified nurse. *International Journal of Nursing Practice, 13*, 75-80.
- Morse, J. (1995). The significance of saturation. *Qualitative Health Research, 5*(2), 147-149.
- Mruck, K., & Mey, G. (2007). Grounded theory and reflexivity. In A. Bryant & K. Charmaz (Eds.), *The SAGE handbook of grounded theory* (pp. 515-538). Thousand Oaks, CA: Sage Publications, Inc.
- Munoz, K., & Jeris, L. (2005). Learning to be interdisciplinary: An action research approach to boundary spanning. *Health Education Journal, 64*(5), 5-12.
- Neill, S. J. (2006). Grounded theory sampling. *Journal of Research in Nursing, 11*, 253-260.
- Ng, S. (2009). An introduction to reflective practice for audiologists. *AudiologyOnline*. Retrieved from http://www.audiologyonline.com/articles/article_detail.asp?article_id=2248

- Ng, S. (Accepted Jan 17, 2011). Theory and research in audiology education: Understanding and representing complexity through informed methodological decisions. *Journal of the American Academy of Audiology, Supplement on Research in Education*.
- Ng, S., Bartlett, D., & Lucy, D. (2008). The Comprehensive Professional Behaviours Development Log - Audiology. [Adapted with permission from Bartlett, D., Lucy, D., Bisbee, L. and Beggs, C. (2004). The Comprehensive Professional Behaviours Development Log. School of Physical Therapy, Faculty of Health Sciences, The University of Western Ontario, London, Canada]. London, ON: The University of Western Ontario, Available at: <http://publish.uwo.ca/~sng9/CPBDL-A.pdf>.
- Ng, S., Bartlett, D. J., & Lucy, S. D. (Accepted Jan 17, 2011). Exploring the utility of measures of critical thinking dispositions and professional behavior development in an audiology education program. *Journal of the American Academy of Audiology, Supplement on Research in Education*.
- Ng, S. L., Bartlett, D. J., & Lucy, S. D. (2010). Introducing the Comprehensive Professional Behaviours Development Log–Audiology (CPBDL-A): Rationale, development and applications. *Canadian Hearing Report, 5*(4), 35-43.
- Nisker, J. (2006). A covenant model for the medical educator-student relationship: Lessons from the covenant model of the physician-patient relationship. *Medical Education, 40*(6), 502-503.
- Noerager Stern, P. (2007). On solid ground: Essential properties for growing grounded theory. In A. Bryant & K. Charmaz (Eds.), *The SAGE handbook of grounded theory* (pp. 114-126). Thousand Oaks, CA: SAGE.
- Orland-Barak, L. (2002). The theoretical sensitivity of the researcher: Reflections on a complex construct. *Reflective Practice, 3*(3), 263 - 278.
- Palmer, C. (2006). *Evidence based decision making in hearing instrument selection, fitting, and outcomes*. Paper presented at the Proceedings of Hearing Care for Adults: An International Conference, Chicago, IL.
- Plath, D. (2006). Evidence-based practice: Current issues and future directions. *Australian Social Work, 59*(1), 56-72.
- Polanyi, M. (1958). *Personal knowledge: Towards a post-critical philosophy*. Chicago, IL: University of Chicago Press.
- Price, A. (2004). Encouraging reflection and critical thinking in practice. *Nursing Standard, 18*(47), 46-52.

- QSR International Pty Ltd. (2008). NVivo qualitative data analysis software (Version 8).
- Redmond, B. (2004). *Reflection in action: Developing reflective practice in health and social services*. Hampshire, UK: Ashgate.
- Regehr, G. (2010). It's NOT rocket science: rethinking our metaphors for research in health professions education. *Medical Education*, 44, 31-39.
- Richardson, B., Lindquist, I., Engardt, M., & Aitman, C. (2002). Professional socialization: Students' expectations of being a physiotherapist. *Medical Teacher*, 24(6), 622-627.
- Richardson, L. (1994). Writing: A method of inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 516-529). Thousand Oaks, CA: SAGE.
- Ronnestad, M. H., & Skovholt, T. M. (2003). The journey of the counselor and therapist: Research findings and perspectives on professional development. *Journal of Career Development*, 30(1), 5-44.
- Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York, NY: Basic Books.
- Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. San Francisco, CA: Jossey-Bass Inc.
- Schön, D. A. (1992). The theory of inquiry: Dewey's legacy to education. *Curriculum Inquiry*, 22(2), 118-139.
- Schwandt, T. A. (2007). *The SAGE dictionary of qualitative inquiry*. Thousand Oaks, CA: Sage Publications, Inc.
- Skovholt, T. M., & Ronnestad, M. H. (2003). Struggles of the novice counselor and therapist. *Journal of Career Development*, 30(1), 45-58.
- Spafford, M. M., Schryer, C. F., Campbell, S. I., & Lingard, L. (2007). Towards embracing clinical uncertainty: Lessons from social work, optometry and medicine. *Journal of Social Work*, 7(2), 155-178.
- Star, S. L. (2007). Living grounded theory: Cognitive and emotional forms of pragmatism. In A. Bryant & K. Charmaz (Eds.), *The SAGE handbook of grounded theory* (pp. 73-93). Thousand Oaks, CA: Sage Publications, Inc.
- Stark, P., Roberts, C., Newble, D., & Bax, N. (2006). Discovering professionalism through guided reflection. *Medical Teacher*, 28(1), e25-e31.

- Stern, P. N. (1980). Grounded theory methodology: Its uses and processes. *Image*, 12(1), 20-23.
- Stewart, S., & Richardson, B. (2000). Reflection and its place in the curriculum on an undergraduate course: Should it be assessed? *Assessment and Evaluation in Higher Education*, 25(4), 369-380.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Thousand Oaks, CA: SAGE.
- Strauss, A., & Corbin, J. (1994). Grounded theory methodology. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 273-285). Thousand Oaks, CA: Sage.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: SAGE.
- Sumsion, J., & Fleet, A. (1996). Reflection: Can we assess it? Should we assess it? *Assessment & Evaluation in Higher Education*, 21(2), 121-131.
- Sutherland Cornett, B. (2006). A principal calling: Professionalism and health care services. *Journal of Communication Disorders*, 39, 301-309.
- Teschendorf, B., & Nemshick, M. (2001). Faculty roles in professional socialization. *Journal of Physical Therapy Education*, 15(1), 4-10.
- Van Manen, M. (1977). Linking ways of knowing with ways of being practical. *Curriculum Inquiry*, 6(3), 205-228.
- Van Manen, M. (1991). *The tact of teaching: The meaning of pedagogical thoughtfulness*. Albany, NY: State University of New York Press.
- Vollmer, H. M., & Mills, D. L. (1996). *Professionalization*. Englewood Cliffs, NJ: Prentice Hall.
- Wear, D., & Castellani, B. (2000). The development of professionalism. Curriculum matters. *Academic Medicine*, 75(6), 602-611.
- Wenger, E. C., & Snyder, W. M. (2000). Communities of practice: The organizational frontier. *Harvard Business Review*, January-February.
- Wessel, J., & Larin, H. (2006). Change in reflections of physiotherapy students over time in clinical placements. *Learning in Health and Social Care*, 5(3), 119-132.
- White, J. (2009). [Personal email communication].

Williams, R. M., Sundeline, G., Foster-Seargeant, E., & Norman, G. R. (2000). Assessing the reliability of grading reflective journal writing. *Journal of Physical Therapy Education*, 14, 23-26.

Xmind Ltd. (2010). Xmind 3 (Version 3.2).

Appendix A: Ethics approval notices



Office of Research Ethics

The University of Western Ontario
 Room 4180 Support Services Building, London, ON, Canada N6A 5C1
 Telephone: (519) 661-3036 Fax: (519) 850-2466 Email: ethics@uwo.ca
 Website: www.uwo.ca/research/ethics

Use of Human Subjects - Ethics Approval Notice

Principal Investigator: Dr. D. Bartlett

Review Number: 15921E

Review Level: Expedited

Review Date: February 19, 2009

Protocol Title: The use of reflection by audiology students

Department and Institution: Physical Therapy, University of Western Ontario

Sponsor:

Ethics Approval Date: March 11, 2009

Expiry Date: December 31, 2010

Documents Reviewed and Approved: UWO Protocol, Letter of Information and Consent

Documents Received for Information:

This is to notify you that The University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects (HSREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the Health Canada/ICH Good Clinical Practice Practices: Consolidated Guidelines; and the applicable laws and regulations of Ontario has reviewed and granted approval to the above referenced study on the approval date noted above. The membership of this REB also complies with the membership requirements for REB's as defined in Division 5 of the Food and Drug Regulations.

The ethics approval for this study shall remain valid until the expiry date noted above assuming timely and acceptable responses to the HSREB's periodic requests for surveillance and monitoring information. If you require an updated approval notice prior to that time you must request it using the UWO Updated Approval Request Form.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the HSREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of monitor, telephone number). Expedited review of minor change(s) in ongoing studies will be considered. Subjects must receive a copy of the signed information/consent documentation.

Investigators must promptly also report to the HSREB:

- changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- all adverse and unexpected experiences or events that are both serious and unexpected;
- new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to this office for approval.

Members of the HSREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the HSREB.

Denise Grafton
 [Redacted Signature]

Chair of HSREB: Dr. Joseph Gilbert

| Ethics Officer to Contact for Further Information | | | |
|---|--|--------------------------------------|--|
| <input type="checkbox"/> Janice Sutherland | <input type="checkbox"/> Elizabeth Wambolt | <input type="checkbox"/> Grace Kelly | <input checked="" type="checkbox"/> Denise Grafton |



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Use of Human Subjects - Ethics Approval Notice

Principal Investigator: Dr. D. Bartlett

Review Number: 15921E

Revision Number: 1

Review Date: August 13, 2009

Review Level: Expedited

Protocol Title: The use of reflection by audiology students

Department and Institution: Physical Therapy, University of Western Ontario

Sponsor:

Ethics Approval Date: August 13, 2009

Expiry Date: December 31, 2010

Documents Reviewed and Approved: Revised compensation. Letter of Information

Documents Received for Information:

This is to notify you that The University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects (HSREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the Health Canada/ICH Good Clinical Practice Practices: Consolidated Guidelines; and the applicable laws and regulations of Ontario has reviewed and granted approval to the above referenced revision(s) or amendment(s) on the approval date noted above. The membership of this REB also complies with the membership requirements for REB's as defined in Division 5 of the Food and Drug Regulations.

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- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

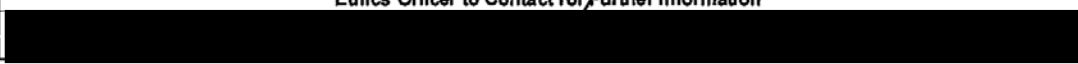
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Chair of HSREB: Dr. Joseph Gilbert

Ethics Officer to Contact for Further Information



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Use of Human Subjects - Ethics Approval Notice

Principal Investigator: Dr. D. Bartlett

Review Level: Expedited

Review Number: 15921E

Revision Number: 2

Review Date: February 09, 2010

Approved Local # of Participants: 20

Protocol Title: The use of reflection by audiology students

Department and Institution: Physical Therapy, University of Western Ontario

Sponsor:

Ethics Approval Date: February 24, 2010

Expiry Date: December 31, 2010

Documents Reviewed and Approved: Revised methodology. Addendum to Letter of Information and Consent

Documents Received for Information:

This is to notify you that The University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects (HSREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the Health Canada/ICH Good Clinical Practice Practices: Consolidated Guidelines; and the applicable laws and regulations of Ontario has reviewed and granted approval to the above referenced revision(s) or amendment(s) on the approval date noted above. The membership of this REB also complies with the membership requirements for REB's as defined in Division 5 of the Food and Drug Regulations.

The ethics approval for this study shall remain valid until the expiry date noted above assuming timely and acceptable responses to the HSREB's periodic requests for surveillance and monitoring information. If you require an updated approval notice prior to that time you must request it using the UWO Updated Approval Request Form.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the HSREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of monitor, telephone number). Expedited review of minor change(s) in ongoing studies will be considered. Subjects must receive a copy of the signed information/consent documentation.

Investigators must promptly also report to the HSREB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to this office for approval.

Members of the HSREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the HSREB.

Chair of HSREB: Dr. Joseph Gilbert
 FDA Ref. #: IRB 0000940

| Ethics Officer to Contact for Further Information | | | |
|---|--|---|---|
| <input type="checkbox"/> Janice Sutherland | <input type="checkbox"/> Elizabeth Wambolt | <input checked="" type="checkbox"/> Grace Kelly | <input type="checkbox"/> Denise Grafton |



Office of Research Ethics

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Use of Human Subjects - Ethics Approval Notice

Principal Investigator: Dr. D. Bartlett

Review Level: Expedited

Review Number: 15921E

Revision Number: 3

Review Date: November 23, 2010

Approved Local # of Participants: 20

Protocol Title: The use of reflection by audiology students

Department and Institution: Physical Therapy, University of Western Ontario

Sponsor:

Ethics Approval Date: November 23, 2010

Expiry Date: December 31, 2010

Documents Reviewed and Approved: Revised participant recruitment, eligibility of subjects and letter of information.

Documents Received for Information:

This is to notify you that The University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects (HSREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the Health Canada/ICH Good Clinical Practice Practices: Consolidated Guidelines; and the applicable laws and regulations of Ontario has reviewed and granted approval to the above referenced revision(s) or amendment(s) on the approval date noted above. The membership of this REB also complies with the membership requirements for REB's as defined in Division 5 of the Food and Drug Regulations.

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Chair of HSREB: Dr. Joseph Gilbert
 FDA Ref. #: IRB 00000940

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 Website: www.uwo.ca/research/ethics

Use of Human Subjects - Ethics Approval Notice

Principal Investigator: Dr. D. Bartlett

Review Number: 15406E

Review Level: Expedited

Review Date: August 13, 2008

Protocol Title: Measuring a cohort of audiology students' critical thinking dispositions and professional behaviours: a baseline program evaluation

Department and Institution: Physical Therapy, University of Western Ontario

Sponsor:

Ethics Approval Date: October 8, 2008

Expiry Date: September 30, 2010

Documents Reviewed and Approved: UWO Protocol, Letter of Information and Consent.

Documents Received for Information:

This is to notify you that The University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects (HSREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the Health Canada/ICH Good Clinical Practice Practices: Consolidated Guidelines; and the applicable laws and regulations of Ontario has reviewed and granted approval to the above referenced study on the approval date noted above. The membership of this REB also complies with the membership requirements for REB's as defined in Division 5 of the Food and Drug Regulations.

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Joseph Gilbert

Chair of HSREB: Dr. Joseph Gilbert

| Ethics Officer to Contact for Further Information | | | |
|---|--|---|---|
| <input type="checkbox"/> Janice Sutherland | <input type="checkbox"/> Elizabeth Wambolt | <input checked="" type="checkbox"/> Grace Kelly | <input type="checkbox"/> Denise Grafton |

Appendix B: Workshop materials

Guidelines for written reflections

The objective of the reflective writing activity is to help you develop reflective practice skills as you begin your clinical experiences. It is not intended to be a comprehensive description of all of your learning experiences. The skills that you will develop through this process will be helpful to you as you continue to develop professionally. Preparing a written reflection of a learning incident is one form of evidence that professional regulators accept as a demonstration of continuing competency. Towards the end of your clinical placement / experience, select a clinical experience that taught you something new about practice so that your subsequent practice has changed or been transformed in some way. This experience or incident can be one of the following:

- An incident in which you feel you really made a difference in the client's outcome
- An incident that went unusually well
- An incident in which things did not go as planned
- An incident that was very ordinary and typical
- An incident that you think captures the quintessence of what audiology is about
- An incident that was particularly demanding
- An incident that was extraordinary and thought-provoking

In a maximum of three pages (single spaced), include all of the following:

- The context of the incident (e.g. setting, time of day, people present)
- A detailed description of what happened, what your concerns were at the time, what you were thinking about as it was taking place, and what you were feeling during the incident
- What you were thinking and feeling after the incident
- What you found most valuable in terms of learning about the situation
- Why the incident was an important learning opportunity for you
- How this learning event will affect your future practice

Please refer to materials from your workshop to refresh your memory about these elements of reflection, or contact Stella Ng for assistance.

When preparing your submission, please do not identify anyone or any place in the scenario by name. Instead, please insert [clinical instructor], [client], [myself], or [clinical facility], as appropriate. Please submit your written reflections by email, in an attachment that only identifies you by your participant number.

References

Benner P. *From Novice to Expert: Excellence and Power in Clinical Nursing Practice*. Menlo Park, CA: Addison-Wesley; 1984

Higgs J, Jones M. Clinical reasoning in the health professions. In Higgs J, Jones M (eds) *Clinical Reasoning in the Health Professions*. Oxford: Butterworth Heinemann; 2000: 3-14.

Due Dates for Reflective Writing Pieces: July 10, YEAR; July 9, YEAR; Dec 1, YEAR (These dates are subject to change/negotiation).

Stella Ng <stella.aud@gmail.com>
[REDACTED]

RE: permission to include copyright-waived material in dissertation

Yates, Lizzy <Lizzy.Yates@contractor.cengage.com>

Wed, Apr 20, 2011 at 7:58 AM

To: "slng@uw" [REDACTED]
[REDACTED]

Dear Stella

Re: A Handbook of Reflective and Experiential Learning

Material requested: Resources, 6,7 & 9

Further to your email, permission is granted for use of the above material in your forthcoming dissertation, subject to the following conditions:

1. The material to be quoted/produced was published without credit to another source. If another source is acknowledged, please apply directly to that source for permission clearance.
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Yours sincerely

Lizzy Yates

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Resource 6

The Presentation: an exercise in reflective writing

Developed by Jenny Moon, University of Exeter

Introduction

This is an account of the experience of giving a presentation. It is written by Marianne who is in her first job after graduating. It is written in three different versions that demonstrate different levels of reflective writing. At the end of the accounts, there are notes on the criteria for the levels of reflection that each account portrays.



Resource 7

Questions to support reflective writing

Developed by Jenny Moon, University of Exeter

It can be useful to prompt the description of the subject matter of reflection in terms of a question such as:

What is the issue/event/topic/plan/project/task/period of time, etc. that is to be the subject matter of the reflection?

Questions to facilitate reflection

- From the description above, what is the issue/are the issues that could be addressed in reflective writing? These issues can be raised within the description or separately.
- Is there anything else you need to consider at the moment in terms of the context?
- What is the nature of the significance of this issue to you?
- How do you feel about it?
- How do your feelings relate to any action?
- Was it good/bad – and what are the implications?
- What do you need to do?
- What other information do you need (ideas, knowledge, opinion, etc.)?

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- Are there previous instances of this event, issue arising that will help you to think more or differently about it?
- Are there others, or the views of others, who are relevant to this matter – and in what way?

Questions that are likely to be helpful in prompting more profound reflection

- Has the nature of your description of the issue/event etc. influenced the manner in which you have gone about the reflective writing?
- Is there relevant formal theory that you need to apply?
- How do your motives for and the context of the reflective writing affect the manner in which you have gone about the task?
- In what way might have you tackled the task differently if the context was not one of formal education (perhaps with assessment)?
- Is there another point of view that you could explore – are there alternative interpretations to consider?
- Are others seeing this issue from different points of view that may be helpful to you to explore?
- Does this issue relate to other contexts – reflection on which may be helpful?
- If you 'step back' from this issue, how does it look different?
- How do you judge your ability to reflect on this matter?
- Do you notice that your feelings about it have changed over time – or in the course of writing this – suggesting that your own frame of reference has changed?
- Are there ethical/moral/political wider social issues that you would want to explore?

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Resource 9

A Generic Framework for Reflective Writing

Developed by Jenny Moon, University of Exeter

Descriptive writing

This account is descriptive and it contains little reflection. It may tell a story but from one point of view at a time and generally one point at a time is made. Ideas tend to be linked by the sequence of the account/story rather than by meaning. The account describes what happened, sometimes mentioning past experiences, sometimes anticipating the future but all in the context of an account of the event:

- There may be references to emotional reactions but they are not explored and not related to behaviour.
- The account may relate to ideas or external information, but these are not considered or questioned and the possible impact on behaviour or the meaning of events is not mentioned.
- There is little attempt to focus on particular issues. Most points are made with similar weight.
- The writing could hardly be deemed to be reflective at all. It could be a reasonably written account of an event that would serve as a basis on which reflection might start, though a good description that precedes reflective accounts will tend to be more focused and to signal points and issues for further reflection.

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Descriptive account with some reflection

This is a descriptive account that signals points for reflection while not actually showing much reflection:

- The basic account is descriptive in the manner of description above. There is little addition of ideas from outside the event, reference to alternative viewpoints or attitudes to others, comment and so on. However, the account is more than just a story. It is focused on the event as if there is a big question or there are questions to be asked and answered. Points on which reflection could occur are signalled.
- The account may mention emotional reactions or be influenced by emotion. Any influence may be noted and possibly questioned.
- There is recognition of the worth of further exploring but it does not go very far. In other words, asking the questions makes it more than a descriptive account, but the lack of attempt to respond to the questions means that there is little actual analysis of the events.
- The questioning does begin to suggest a 'standing back from the event' in (usually) isolated areas of the account.
- There is a sense of recognition this is an incident from which learning can be gained, but the reflection does not go sufficiently deep to enable the learning to begin to occur.

Reflective writing (1)

- There is description but it is focused with particular aspects accentuated for reflective comment. There may be a sense that the material is being mullied around. It is no longer a straightforward account of an event, but it is definitely reflective.
- There is evidence of external ideas or information and where this occurs, the material is subjected to reflection.
- The account shows some analysis and there is recognition of the worth of exploring motives or reasons for behaviour.
- There is recognition of any emotional content, a questioning of its role and influence and an attempt to consider its significance in shaping the views presented.
- Where relevant, there is willingness to be critical of the action of self or others. There is likely to be some self-questioning and willingness also to recognize the overall effect of the event on self. In other words, there is some 'standing back' from the event.

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Excerpted, with permission, from: Moon, J. A. (2004). *A Handbook of Reflective and Experiential Learning: Theory and Practice*. New York, NY: Routledge.

Resource 6: p. 204

Resource 7: p. 210

Resource 9: p. 214

Appendix C: Letters of information and consent forms

[to be printed on letterhead]

Letter of Information

The Use of Reflection by Audiology Students

Principal Investigator: Doreen Bartlett (Associate Professor, Faculty of Health Sciences, University of Western Ontario) CONTACT INFO

Co-investigators: Stella Ng (PhD Candidate, Health Professional Education, Health and Rehabilitation Sciences, University of Western Ontario) CONTACT INFO; Deborah Lucy (Associate Professor, Faculty of Health Sciences, University of Western Ontario) CONTACT INFO; Richard C. Seewald (Professor, National Centre for Audiology / School of Communication Sciences and Disorders, University of Western Ontario) CONTACT INFO

You are being invited to participate in this research project. The purpose of this letter is to provide you with information you require to make a decision to participate.

Purpose of the Project: The purpose of this project is to provide baseline information relating to the use of reflection by audiology students, as they complete the requirements of the current audiology program.

Research Involvement: You are eligible for this study if you are a first-year MCISc Audiology student expected to graduate from the program in 2010, a faculty member or a clinical supervisor in Western's audiology program. If you are a student, you will be one of approximately 18 participants in this study. The study will take place from February 2009 to December 2010. After agreeing to participate, you will be contacted via email to arrange for participation in an initial meeting to discuss reflective practice. This meeting will include participants and Stella Ng, who will provide an overview of reflective practice and answer your questions relating to reflection. You will be provided with written guidelines to help you complete your own reflections. You will then be asked to complete and submit (via email, mail or in person) written reflections following three clinical experiences: 1) following your first program-required, external summer placement, 2) following your second, program-required, external summer placement, and 3) following a 3-month period of initial practice. In total, participation in this study should not exceed 10 hours, although the exact time it takes for you to complete your reflections may vary. Some participants may be contacted to participate in an optional follow-up interview (face-to-face or via telephone) within the month following each written reflection submission (please see appended timeline). Each interview will take no longer than 1 hour.

If you are a faculty member or clinical supervisor, you may be contacted for a face-to-face interview within the month following each of the written reflection submission periods (please see appended timeline), to discuss the use of reflection by audiology students.

Considerations: Participation in this study is voluntary. You may refuse to participate, refuse to answer questions, or withdraw from the study at any time with no effect on your academic status. Due to Stella Ng's participation in this study, Stella will *not* accept any teaching or teaching-related positions that would require her to evaluate the participating cohort of students, for the duration of their time in the audiology program. You will receive a small amount of compensation for your time.

Privacy: The hard copies of your completed reflections will be stored in a locked cabinet; electronic copies of your reflections will be stored on a password-protected computer in a locked laboratory with no identifying information. Copies of your reflections and interviews (if applicable) will be destroyed following completion of this work, and will be stored no longer than 7 years. Digital audio recordings of your interviews (if applicable) will be stored in a locked cabinet in a locked laboratory and deleted immediately following transcription. All information you provide will be considered confidential. If the results of the study are published, your name will not be used. No information that discloses your identity will be released or published.

Benefits: You may benefit by being made more aware of reflective practice, which contributes to improved clinical practice. Feedback on your written reflections will be provided to you. There are no known risks associated with participation in this study.

Other Pertinent Information:

You will have the option to receive a report of results of this study via email and to participate in potential follow-up aspects of the study. You may indicate your preferences to these options on the consent form that follows.

If you have any questions about your rights as a research subject, you may contact: The Office of Research Ethics at CONTACT INFO

This letter is yours to keep for your future reference. If you agree to participate in this study, please sign the attached consent form and return these to us in the stamped addressed envelope.

Thank you in advance for your interest and participation in this research project.

Yours Sincerely,
Stella Ng

The Use of Reflection by Audiology Students – Project Timeline

| Year 1 [REDACTED] | | | | | | | | | | | |
|--------------------------|-----|-----|-----|---|-----|--|-----|---|------|------|-----|
| Term 1 | | | | Term 2 | | | | Term 3 | | | |
| Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | July | Aug |
| CCTDI # 1 CPBDL-A # 1 | | | | | | Initial meeting to discuss written reflections to be submitted | | External Placement # 1 Submit first reflection | | | |
| Year 2 [REDACTED] | | | | | | | | | | | |
| Term 1 | | | | Term 2 | | | | Term 3 | | | |
| Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | July | Aug |
| CCTDI # 2 CPBDL-A # 2 | | | | Optional placement CCTDI # 3 CPBDL-A # 3 | | | | External Placement # 2 Submit second reflection | | | |
| Sept | Oct | Nov | Dec | Submit final reflection no later than [REDACTED] | | | | | | | |

Note: Bolded items are regular audiology program requirements or program options. Non-bolded items are activities specific to this research study.

NB: Dates omitted to protect privacy.

Consent Form**The Use of Reflection by Audiology Students**

I have read the Letter of Information, (have had the nature of the study explained to me) and I agree to participate. All questions have been answered to my satisfaction.

Name (Please print):

Signature:

Date:

Name of person obtaining informed consent (Please print):

Signature:

Date;

The Use of Reflection by Audiology Students

- I would like to receive the results of this project via email.
- I would be interested in participating in follow-up work relating to reflective practice

Contact Information:

Name:

Email address:

Mailing address:

[letterhead]

Addendum to Letter of Information for the Project: *The use of reflection by audiology students*

Principal Investigator: Doreen Bartlett (Associate Professor, Faculty of Health Sciences, University of Western Ontario) CONTACT INFO

Co-investigators: Stella Ng (PhD Candidate, Health Professional Education, Health and Rehabilitation Sciences, University of Western Ontario) CONTACT INFO; Deborah Lucy (Associate Professor, Faculty of Health Sciences, University of Western Ontario) CONTACT INFO; Richard C. Seewald (Professor, National Centre for Audiology / School of Communication Sciences and Disorders, University of Western Ontario) CONTACT INFO

Two changes will be made to the project named above, for which you are a participant.

The changes will be described below, and if you agree to continue to participate given these changes, you may sign below to acknowledge your awareness and agreement with the modifications to the project.

Change # 1: Data from the Comprehensive Professional Behaviours Development Log – Audiology (CPBDL-A) from the project: *Measuring a cohort of audiology students' critical thinking dispositions and professional behaviours: a baseline program evaluation* (herein referred to as Project A) will be used in the project entitled: *The Use of Reflection by Audiology Students* (herein referred to as Project B). The CPBDL-A data will be used to supplement the data provided as part of Project B (i.e. written reflections and interviews for some participants). The reason for this change is that when the investigators conducted early analysis of participants' written reflections, it appeared that goal-setting and reflective elements of the CPBDL-A could add to the theory under development for Project B. This type of further data sampling is consistent with the investigators' methodological approach for Project B.

Change # 2: During the final meeting for Project A (set to occur in March 2010), a 25-minute reflective workshop will be held (for those participants who agree), to supplement your knowledge and thinking about reflection as it relates to your learning and practice, prior to your final clinical placement. Total time for the combined Project A data collection session and Project B review workshop will not exceed 1 hour.

If you agree to the above two changes, please sign below. You are welcome to withdraw participation from one or both project(s) at any time.

Acknowledgement of modifications to the study: *The use of reflection by audiology students*

I _____ acknowledge that I have read and understand the above two changes to Project B and hereby agree to continue to participate in the modified research study by signing below.

Signature: _____ Date: _____

Witness: _____ Date: _____

Appendix D: Audiology Education Program Summary

| Semester | Preparatory Year for students lacking the prerequisites for the graduate program | 1st year graduate studies | 2nd year graduate studies |
|------------|---|--|--|
| 1 – Fall | Coursework | Coursework including aural rehabilitation (AR) | Coursework including Evidence-Based Practice |
| 2 – Winter | Coursework | Coursework “In-house” part-time placement | Coursework including Professional Issues and Counseling Optional external part-time placement Optional AR seminar with hands-on experience running AR groups |
| 3 – Summer | Break | Full-time 8-week external placement | Full-time 8-week external placement |
| Notes | <p>In-house placement = within the school’s audiology clinic</p> <p>External placement = for most students, the external placement refers to a placement outside of the school’s in-house audiology clinic, although 1-2 students may complete one of their full-time placements in-house</p> | | |

Exposure to explicit discussion or enactment of reflection and reflective practice:

- Students were exposed to reflection and reflective practice through this research (reflective workshops – Winter term of Year 1 and Year 2)
- Some students were exposed to reflection through in-house clinical placements – asked by clinical faculty to write reflections upon clinical experiences and to submit these for feedback and evaluation purposes
- Some students were exposed to reflection through the request to write reflections on specific topics as part of coursework (counselling, aural rehabilitation)

NB: Curriculum was undergoing review at the time of this study. Revised curriculum has since been implemented.

Appendix E: Initial interview guides (Questions subsequently evolved based on theoretical sampling)

Interview Guide (for student participants)

Preamble: Thank you for participating in this study. As you know, I'm interested in understanding how students use reflection to develop as practitioners, and I'm interested in hearing your thoughts and experiences on this topic.

I'm using an interview guide, but feel free to add anything you think may be relevant as we go...

Initial Open-ended Questions:

1. What does reflection mean to you?
 - a. How would you define it?
 - b. What place does reflection have in your personal/professional life?
2. In your written reflection, you mentioned _____.
Looking back on that incident now, could you expand on any new or different thoughts or reflections (if any)?
3. Since writing this reflection (referring to written reflection previously submitted), describe situations in which you have found yourself making use of reflection on past actions (if any)?
 - a. How has this affected you as a developing professional practitioner?
4. Since writing this reflection (referring to written reflection previously submitted), describe situations in which you have found yourself making use of reflection in the midst of your actions (if any)?
 - a. How has this affected you as a developing professional practitioner?
5. Since writing this reflection (referring to written reflection previously submitted), describe situations in which you have found yourself making use of anticipatory reflection (if any)?
 - a. How has this affected you as a developing professional practitioner?

Intermediate Questions:

1. What, if anything, did you know about reflection before our workshop?
2. What do you currently know about reflection as it relates to:
 - a. Learning
 - b. Professional practice
 - c. Professional development? (only use all three of these options if probing is necessary to elicit an answer).
3. How have your views about reflection changed over time (if at all)?
4. What do you think about reflection and its usefulness to you now?
5. Describe how you find reflection useful (if at all) in different ways or degrees in terms of guiding:
 - a. Use of theory in practice
 - b. Use of practice-generated knowledge (experience)
 - c. Use of research in practice

6. What did you think of the process of writing a reflection?
 - a. Was it easy or difficult?
 - b. Was the guide helpful or restricting?
 - c. How would you improve the process?
7. Have any supervisors, faculty members, colleagues, peers been helpful to you in your use of reflection in practice?
 - a. Who? (not specific names)
 - b. How have they been helpful?
8. Have any other factors been helpful to you in terms of developing your use of reflection? If so, what and how?
9. Has anything (probes: time, course formats, placement settings, general life experiences) presented a challenge for becoming a reflective practitioner? (not specific names)

Ending Questions:

1. How (if at all), do you think you will continue to use reflection in your practice?
2. What would help support you in your reflective practices?
3. Has reflection proven helpful to you?
 - a. What does it help with?
 - b. How has it been helpful?
4. Do you have any last thoughts to add, on the use of reflection as it pertains to your development into a healthcare professional?
5. Is there anything else you think I should know?
6. Is there anything you would like to ask me?

Concluding remarks: Thanks for participating in the study and this interview today. I look forward to your future reflections and wish you all the best in your professional journey. Please contact me if you think of anything after the interview that you felt uncomfortable with, and we can decide to omit it from my results.

Interview Guide (for potential clinical faculty member participants)

Preamble: Thank you for participating in this study. As you know, I'm interested in understanding how students use reflection to develop as practitioners, and I'm interested in hearing your thoughts and experiences on this topic. I'm using an interview guide, but feel free to add anything you think may be relevant as we go...

1. What is your understanding of reflection and reflective practice in the context of professional education and/or professional development?
2. What, if at all, do you think reflection and reflective practice have to offer to students?
3. How, if at all, do you foster reflective practices with your students?
4. How, if at all, do you model reflective practices with your students?
5. Can you think of examples of when your students have used reflection in the midst of practice, leaving student and client names out.
6. Can you tell me about some examples, if any, of when your students have used reflection retrospectively to improve their practices?
7. Can you tell me about examples, if any, of when your students have used reflection in anticipation of an event to improve their practices?
8. Can you tell me about any potential negative impacts of reflection on student learning and professional development?
9. Have you had any discussions with students that involved guiding their reflection on clinical experiences? If so, can you think of and discuss examples, leaving student and client names out.
10. Describe how, if at all, you find reflection useful in different ways or degrees in terms of:
 - a. guiding theory or practice,
 - b. personal or professional development
 - c. use of research in practice / vice versa
 - d. other?
11. Do you think students will continue to use reflection in their future professional practices, and if so, how might they attempt to do so?
12. How are students taught to engage in reflection in this program?
13. Do you think it is important to educate students about reflective practice in audiology professional programs? Why?
14. How would you approach this?
15. How has my project influenced your focus on reflection (if at all) in your interactions with students?
16. Do you have any last thoughts to add, on the use of reflection as it pertains to student development into a healthcare professional?

Concluding remarks: Thanks for participating in the study and this interview today. I appreciate your time and willingness to share your thoughts. Please contact me if you think of anything after the interview that you felt uncomfortable with, and we can decide to omit it from my results.

Appendix F: Exemplary excerpts demonstrating analysis process, focusing on the coding and diagramming processes

NB: The process below did not occur in the simplistic linear fashion as presented below but rather moved iteratively between processes and stages as per constant comparative method.

Time-Point 1

Quotations tagged with the initial code *emotions*:

[<Internals\1002-1>](#) - § 1 reference coded [1.17% Coverage]

Reference 1 - 1.17% Coverage

Being rushed always adds pressure and increases my stress level

[<Internals\1005-1>](#) - § 1 reference coded [2.82% Coverage]

Reference 1 - 2.82% Coverage

During this assessment I felt stressed and kind of helpless

[<Internals\1007-1>](#) - § 4 references coded [9.62% Coverage]

Reference 1 - 1.05% Coverage

When I first started I generally always worried about the next patient

Reference 2 - 1.88% Coverage

This made me happy because usually it is a race against the clock to keep a child on task and get enough frequencies tested.

Reference 3 – 4.87% Coverage

That made me happy as well because clearly the tubes had helped him. I think I was also excited because clearly he had many health issues over the course of his life and will probably have more before he is completely healthy but if the tubes could help him hear better then that would help one aspect of his communication.

Reference 4 - 1.82% Coverage

At first I was shocked because I've never had someone react to a hearing test in that way! But then I was really touched.

[<Internals\1008-1>](#) - § 1 reference coded [1.60% Coverage]

Reference 1 - 1.60% Coverage

I cannot be emotionally needy like this when dealing with clients and I should not shy away from challenges.

[<Internals\1012-1>](#) - § 3 references coded [5.39% Coverage]

Reference 1 - 1.08% Coverage

I was sincerely taken aback by this little girl's raw honesty and emotion

Reference 2 - 2.65% Coverage

I had my own fears, fears of how well I was performing on my first real placement, fears that I might mess something up; however, like her, I did not always show it on the outside

Reference 3 - 0.78% Coverage

I was quite upset myself, hearing what she was saying

[<Internals\1013-1>](#) - § 3 references coded [4.97% Coverage]

Reference 1 - 1.00% Coverage

It's a very nerve racking and emotional experience

Reference 2 - 2.61% Coverage

Even though the guardians were already aware that the child had a hearing loss, watching this test was a very emotional experience

Reference 3 - 1.36% Coverage

Watching my supervisor test this tiny little baby was pretty intense

<Internals\1014-1> - § 2 references coded [1.24% Coverage]

Reference 1 - 0.20% Coverage
frustrated

Reference 2 - 1.04% Coverage
frustrated and felt that I had failed as a clinician

<Internals\1015-1> - § 1 reference coded [4.69% Coverage]

Reference 1 - 4.69% Coverage

I began my placement feeling extremely anxious and nervous for what was to come. I was fearful that my supervisor would have expectations about my abilities that far exceeded my actual skill level.

<Internals\1018-1> - § 1 reference coded [2.64% Coverage]

Reference 1 - 2.64% Coverage

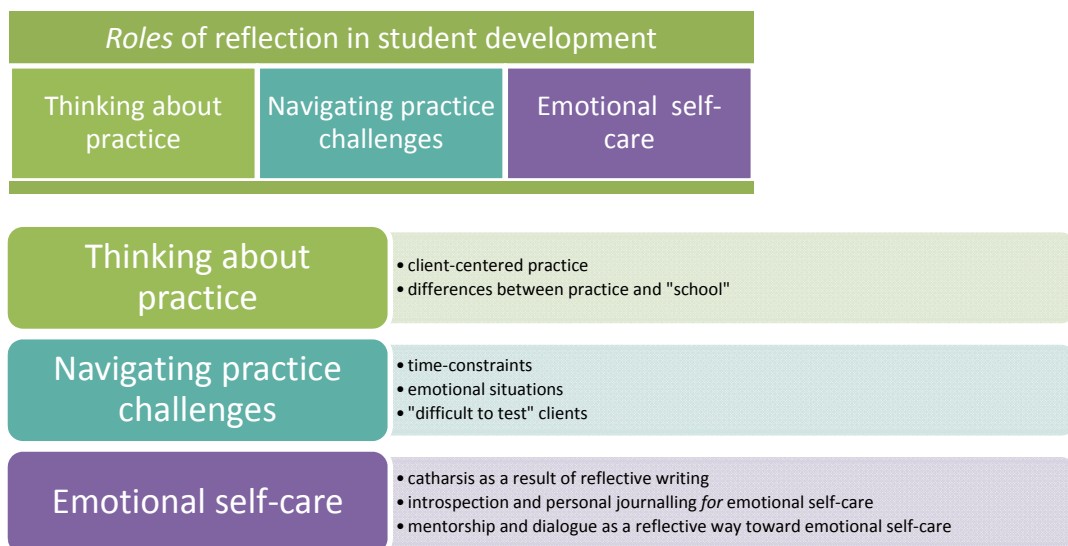
I learned a lot on an emotional level.

Time-Point 2

New initial codes grouped under focused codes *emotional responses and management of emotions*:

- Apprehension
- Disappointment
- Emotional Experiences
- Emotional Responses
- Mixed Emotions
- “Quite a Shock” (*in vivo*)
- “Reflection helps you regulate your own emotions” (*in vivo*)
- Stress
- Upsetting Experience

Analysis diagrams arising from initial memoing and beginnings of theoretical coding:



Theoretical Sampling:

Based on in-depth storying of an emotional experience (1007-2) that seemed cathartic to a student, the student was interviewed (1007-2-interview) with some probing into the focused code of emotional responses and also emotional management.

Excerpt from written reflection:

...At this point the patient was very frustrated because he did not understand this concept of connectedness between hearing and speech. He was getting mad at the caregivers and they were both arguing the same points back and forth to each other. ... This went on for about 30 minutes, everyone's voices were elevated and everyone in the room was becoming more emotional and getting frustrated. ... He has had a lot of medical problems in his life and is now in a new country, learning a new language and being of adolescent age being different is not a good thing usually. Any single one of these factors would affect a person but all of these things combined would definitely take a toll on a child. On the other hand, the caregivers want what is best for the patient and therefore, have helped him so much already and continue to support him. This is why they were so adamant on having him understand their point of view. ... I was frustrated and overwhelmed myself because it was an argument that had been going nowhere for 30 minutes, it was heated, they were yelling at each other back and forth. It left me tired and feeling drained emotionally and physically.

Excerpt from interview:

Researcher: ... Did you find that in writing it you learned anything different or it helped you deal with the situation or anything like that?

1007: ummm I think it uh kinda reflecting on like what his thoughts might have been helped me. Like at the time I wasn't thinking about that at all but then. Writing it kind of helped me um I guess like understand his point of view maybe a little bit better?...

This data led to the theoretical coding of emotional self-care as a property of the "reflection as a tool" facet. Similarly, others at Time-point 2 discussed emotional self-care:

Excerpt from Time-point 2 **memo** entitled *Emotional Self-Care*:

In terms of their understandings of the purpose of reflection, students seemed to see reflection not only as a way to self-attend to or self-"regulate" (regulate an in vivo code their own emotions, but also as a way to discuss and "confront" (in vivo code) emotional tensions (series of supporting quotations followed in memo, such as the one below):

My supervisor and I talked about [the emotional situation], so rather than tuck it away and not deal with it or just forget about it and hope it doesn't happen again, the discussion confronted the situation. I was able to talk about it and will be better prepared in the future if it happens again (1012-2).

Time-Point 3

New initial codes grouped under focused code *emotional self-care*:

- Enjoyment of Profession
- Grappling with Conflict
- Uncertainty
- Negative Experiences
- Patting Self on Back
- Self-Advocacy
- Self-Care
- Working through Doubts

Neither new initial codes nor relationships or extensions of prior codes were found in analysis of the final two interviews of Time-point 3. Thus, theoretical sufficiency was declared for this focused code.

Analytic memo-writing expanded on the focused code of emotional self-care, including embracing uncertainty, raising it to the level of a property. In analyzing analysis memos, student uncertainty developed as a sub-concept of emotional self-care. For example, "Early on, the unexpected or the uncertain served as a source of stress. However, reflection seemed to be used as a way through which students realized that uncertainty was okay." Embracing uncertainty is terminology that I pulled from the literature (Spafford, et al., 2007) that seems to apply to some of the quotes from participants. For example, this participant spent the majority of his/her final reflective writing piece discussing what s/he didn't know, and how this lack of certainty was concerning. At the end of the reflective piece, s/he concludes with some acceptance of uncertainty and indication that it is okay to "see how things will go...":

I definitely like my job; however, I feel like it was such a hard transition and I'm not sure if it's supposed to be like that or not because this is my first job and I have nothing to compare it to! However, I am constantly learning new things and I know that I will still be learning new things for many years to come! I'm glad I made the decision to start off in a hospital for my first job and I guess we will see how things go in the future! (1017-3).

A final example of the development of the emotional self-care property comes from the CPBDL-A, in a goal relating to empathy/sensitive practice and respect. After self-critiquing regarding his/her lack of demonstration of empathy and

interest in patients/clients, a student concludes his/her goal for this professional behavior with:

“I feel now I am more comfortable and will be able to show more interest and empathy...I think the more comfortable I am, the more interest and empathy [I will show]” (CPBDL-A of 1017-3).

Analytic memo on the goal above:

This example shows the tool of reflection at work for emotional self-care (and overall growth) in that rather than leaving the goal-setting activity as an exercise in self-critique and stating a need for improvement, this student has found a justifiable explanation for his/her previous “failings” (code). This justification may serve as a way to turn the past shortcomings into a springboard for future improvement (hence the goal-setting) as opposed to remaining a source of failure upon which to perseverate or “beat oneself up.” That is, in terms of a process for emotional self-care and growth, reflection offers a way to monitor one’s behaviors, perhaps come up with a justification that serves as emotional self-care, and then to set a goal for improvement.

Raising the level of codes:

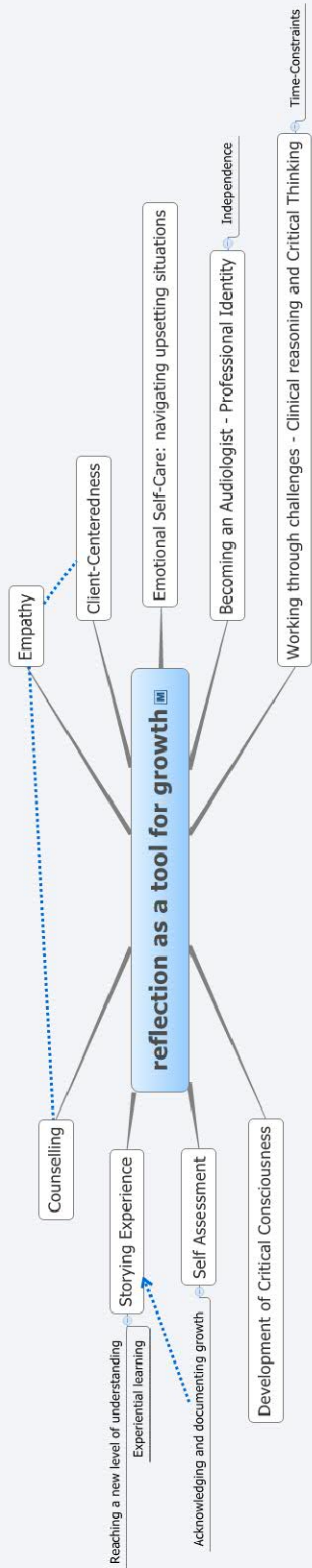
Additional analysis took remaining codes to higher levels of coding. For example, the sharing of upsetting experiences (initial code, Time-point 1) and negative experiences (initial code, Time-point 3) were grouped together. These initial codes, at the theoretical level, are a part of the process of students using reflection as a tool for emotional self-care, specifically as part of the property of using reflection as an *outlet* and *safe space* (sub-process of emotional self-care) for sharing these experiences.

Sorting and diagramming:

Sorting led to this property becoming a part of the facet of reflection as a tool. Other properties of this facet are shown in the diagramming example that follows. Each node in the diagram below represents a focused code upon which advanced memoing was performed, raising the code to the level of a theoretical property of the tool facet.

See Section 4.4.1 for the processes of emotional self-care and embracing uncertainty enabled through reflection as theorized in the grounded theory.

What does reflection offer to students in terms of personal/professional development? **E**



Curriculum Vitae

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Post-secondary Education and Degrees: The University of Western Ontario
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Ph.D. Health and Rehabilitation Sciences, Health Professional Education

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B.A. Honors Perception and Communication Science (Scholar's Electives Program) with distinction

Significant Graduate Research Awards:

Lawson Research Institute Internal Research Fund
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CIHR-STIHR Fellowship in Health Care, Technology, and Place, University of Toronto
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Educational Audiology Association Doctoral Scholarship
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Ontario Graduate Scholarship
2004-2005, 2005-2006 (declined), 2010-2011

Ontario Graduate Scholarship in Science and Technology
2007-2008

Canadian Institutes of Health Research Canada Graduate Scholarship
2005-2006

Canadian Language and Literacy Research Network
Postgraduate Scholarship Supplement
2004-2005

Related Work Experience: Educational Audiologist, Thames Valley District School Board
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Lecturer, School of Communication Sciences and Disorders
2010-2012: Evidence-Based Practice Working Groups
2011: Professional Issues and Clinical Management
2010: Hearing Management for Speech-Language Pathologists

Teaching Assistant, School of Communication Sciences and Disorders
2004-2010

Selected Publications:

Peer-reviewed book chapter:

Kinsella, E.A., Caty, M-E., **Ng, S.**, Jenkins, K. Reflective Practice for Allied Health Professionals: Theory and Applications. In English, L. (Ed.) *Health and Adult Learning*. In Press.

Peer-reviewed articles:

Ng, S. (Accepted). Theory and research in audiology education: Understanding and representing complexity through informed methodological decisions. *Journal of the American Academy of Audiology Supplement on Research in Education*.

Ng, S., Bartlett, D.J., Lucy, S.D. (Accepted). Exploring the utility of measures of critical thinking dispositions and professional behaviour development in an audiology education program. *Journal of the American Academy of Audiology Supplement on Research in Education*.

Ng, S.L., Meston, C.M., Scollie, S.D., Seewald, R.C. (2011). Adaptation of the BKB-SIN test for use as a pediatric aided outcome measure. *Journal of the American Academy of Audiology*, 22, 375-386.

Ng, S.L., Fernandez, V., Buckrell, B., Gregory, K. (2010). Report on a school board's interprofessional approach to managing the provision of Hearing Assistance Technology for Auditory Processing Disorders. *Journal of Educational Audiology*, 16, 73-85.

Robertson, E.K., Joannis, M.F., Desroches, A.S. **Ng, S. L.** (2009). Categorical speech perception deficits distinguish language and reading impairments in children. *Developmental Science*, 12(5), 753-67.

Articles in professional journals:

Ng, S.L., Bartlett, D., Lucy, S.D. (2010). Introducing the Comprehensive Professional Behaviours Development Log – Audiology (CPBDL-A): Rationale, development and applications. *Canadian Hearing Report* 5(4).

Ng, S.L. (2009, June). An introduction to reflective practice for audiologists. *Audiology Online*.

Selected Presentations:

Ng, S.L. (2011, June). *Reflective Practice: Something New?...Valuing You*. Invited workshop for 1to1 Rehab, Toronto ON.

Ng, S.L. (2009, October). “*Drowning in Information, Starving for Knowledge:*” *Rethinking professional knowledge for audiology education and practice*. Podium presented at the 2009 Canadian Academy of Audiology Conference, Toronto ON.

Ng, S.L., Bartlett, D.J., & Lucy, S.D. (2009, October). *Inspiring professional behaviour: Adaptation of the Comprehensive Professional Behaviours Development Log (CPBDL) for use in audiology (CPBDL-A)*. Poster session presented at the 2009 Canadian Academy of Audiology Conference, Toronto ON.

Ng, S.L. & Caty, M-E. (2009, October). *A Class on Qualitative Inquiry within an Evidence-Based Practice Course*. Oral presentation presented at the First Annual Research Symposium, Schulich School of Medicine and Dentistry Centre for Education Research & Innovation, London ON.

Ng, S.L. (2009, May). *Fitting reflection into audiology*. Poster session presented at the Engaging Reflection in Health Professional Education & Practice Conference, London ON.

Ng, S.L. (2008, February). *Understanding the professional socialization of audiology students through reflection*. Poster session presented at the Health and Rehabilitation Sciences Research Forum, The University of Western Ontario, London ON. Awarded 2nd place PhD literature review prize.