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# The Use of Hermeneutics in a Mixed Methods Design

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## The Use of Hermeneutics in a Mixed Methods Design

### **Abstract**

Combining methods in a single study is becoming a more common practice because of the limitations of using only one approach to fully address all aspects of a research question. Hermeneutics in this paper is discussed in relation to a large national study that investigated issues influencing the ability of international graduates to work as occupational therapists in Canada. Using methods that reflect different ontological and epistemological beliefs was necessary to attain a comprehensive view of enablers and barriers that influence workforce integration. Hermeneutics proved to be a credible and flexible strategy for combining methods to create a deep understanding of acculturation issues for international occupational therapy graduates wishing to work in Canada.

### **Keywords**

Qualitative Methods, Multi-method Approach, and International Mobility

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# **The Use of Hermeneutics in a Mixed Methods Design**

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## **Introduction**

The use of hermeneutics has grown from its roots in the interpretation of Greek classical literature. Although traditionally known as a method to identify the meaning and intent of Biblical scripture, the rules and principles of hermeneutics have become used not only for understanding written information, but also for interpreting human practices, events, and situations (Crotty, 1998). Hermeneutics can therefore serve as a strategy to address a broad range of research questions. This paper explores the rationale for using hermeneutics for studies with a mixed methods design, by describing its application in a large national project that explored issues influencing the ability of international graduates to work as occupational therapists in Canada. The study demonstrated the flexibility and utility of hermeneutics for gathering and interpreting information from a range of sources. While the results of the study are reported elsewhere (von Zweck, 2006), this paper provides a review of essential hermeneutic constructs and their application within this project. It is hoped that beginning researchers and others will gain understanding of the rigour and adaptability offered by this approach and consider hermeneutics as a credible strategy for using mixed methods in their own work.

## **Research Issue**

Acculturation refers to a phenomenon that occurs when different cultural groups come together, such as when immigrants come from their homelands to settle and work in Canada. Acculturation results in the need for individuals to develop new relationships

and behaviours to adapt to their changing environment (Berry & Sam, 1997). A wide range of outcomes may occur as a result of acculturation. Workforce integration is the acculturation outcome promoted in Canadian society for immigrants settling in this country and occurs when immigrants are able to work in their chosen profession as well as have the opportunity to retain their cultural identity from their society-of-origin (Citizenship and Immigration Canada, 2001). However, despite demand for occupational therapy services that exceeds supply in many areas, a significant number of internationally educated occupational therapists currently experience difficulties with workforce integration in Canada.

International graduates who wish to work as occupational therapists in Canada must successfully manage a cumbersome process involving meeting Canadian immigration requirements, fulfilling professional entry-to-practice criteria, finding employment as occupational therapists, and relocating and settling in Canada. Entry-to-practice criteria are established provincially by regulatory organizations and vary in different jurisdictions across the country. Requirements in most provinces include an academic credential review, an assessment of language competency, and successful completion of a national certification examination.

Claudia was appointed by the Canadian Association of Occupational Therapists (CAOT) to conduct this research with funding from the Government of Canada's Foreign Credential Recognition Program. The purpose of the research was to explore issues that facilitate and/or inhibit the integration of international occupational therapy graduates into the Canadian workforce. To address this topic, potential issues that may influence the ability of international graduates to work in Canada were initially considered to develop five research sub-questions. The sub-questions included:

1. What types of policy affect the ability of international graduates to work as an occupational therapist in Canada?
2. What resources are available to assist international graduates to work in Canada as an occupational therapist?
3. What workforce issues affect the ability of international graduates to work in Canada as an occupational therapist?
4. What are the characteristics of international graduates that come to work in Canada as occupational therapists?
5. What are the experiences of international graduates prior to leaving their homeland and with integrating into the Canadian workforce?

The findings of the research were used to develop recommendations for future action to address identified issues.

### **Research Players**

Claudia, a doctoral candidate, was the primary investigator for this project. Claudia was aware of difficulties of some international graduates with meeting requirements to enter occupational therapy practice in Canada as result of her work with CAOT. As CAOT Executive Director, Claudia oversees the development and administration of the national certification examination that many international graduates

struggle to successfully complete in order to practice in Canada. Wendy and Margo acted as her supervisors on her thesis committee and provided guidance and critical appraisal regarding the design and methodology of the study. Margo used hermeneutics in her recent research and suggested this strategy to study workforce integration issues.

At the outset of the project, it was recognized that problems associated with the workforce integration of international graduates could not be resolved through simple interventions involving only the researchers or CAOT. Issues that potentially influence the ability of international graduates to work in Canada involve a wide variety of stakeholders such as regulators, educators, and professional associations. Information was needed from the perspective of the key stakeholders involved to understand the influencing factors and ultimately develop strategic recommendations to address the complex issues. Based on her successful experience with similar multi-stakeholder initiatives, Claudia developed a project advisory committee to develop the collaboration needed to achieve the study objectives. The project advisory committee provided input into determining the knowledge that was to be gained in this study, assisted in identifying potential sources for the required information, and helped to develop project recommendations. Representatives of regulatory organizations, education programs, and professional associations were members of this advisory committee. To solicit members, each of the organizations was contacted and invited to nominate a representative. An employer of internationally educated occupational therapists, as well as two internationally educated occupational therapists, were also included in the advisory group. The employer and international graduate representatives were selected from a pool of volunteers recruited through an email message sent to CAOT members. Individuals were chosen that were well informed about the study topic and had different experiences with the acculturation process of international graduates. A diversity of experiences was sought to inform the work of the committee.

### **Hermeneutics**

Hermeneutics is the science of interpretation (Crotty, 1998) and is situated in the interpretive paradigm. Schleiermacher founded modern hermeneutics early in the 19<sup>th</sup> century by recognizing the potential for its use to understand human sciences (Crotty). Later in the same century, Dilthey expanded the use of hermeneutics for cultural systems and organizations (Dilthey, 1883/1988; Paterson & Higgs, 2005). The philosopher Heidegger understood hermeneutics to be more than a methodology for interpretation. For Heidegger, hermeneutical phenomenology represented how *Dasien* (the meaning of being) is understood (Heidegger, 1962). Heidegger's student, Gadamer extended this ontological exploration of understanding and became a crucial figure in philosophical hermeneutics (Koch, 1996). Essential constructs that underlie philosophical hermeneutics were described by Gadamer as metaphors and included the hermeneutic circle, dialogue, and fusion of horizons (Gadamer, 1981; Weinsheimer, 1985).

### **Hermeneutic Circle**

Schleiermacher suggested that through hermeneutics, researchers could develop *empathy* with text, a relationship similar to what occurs when listeners understand

information conveyed by a speaker. Dilthey later emphasized the importance of social and historical context in guiding a researcher's thoughts and actions in developing this understanding (Crotty, 1998). In his work exploring *Dasein*, Heidegger (1962) expanded these notions, stating that a researcher could never understand experiences as they actually had been lived because *pre-understandings* or *forestructures* influence their interpretation. Heidegger described a *circle of understanding* to explain how such *forestructures* were integrated into an understanding of being. He suggested that the discovery of *Dasein* is a circular process, whereby a phenomenon first presented in a nebulous unstructured form is combined with past knowledge and experience to create an enlightened understanding of the experience. This enlightenment then enriches understanding of future events and experiences, completing a circle that recurs indefinitely to create increasing knowledge (Crotty).

The basis of Heidegger's circle of understanding is the *hermeneutic circle*, a process that explains "how what is understood forms the basis for grasping that which still remains to be understood" (Bontekoe, 1996, p. 2). In the early 1900s, Schleiermacher first recognized the significance of the hermeneutic circle for understanding how information is integrated in the interpretation of text (Crotty, 1998). As described by the hermeneutic circle, understanding is gained by alternating between considering a phenomenon as a whole and as something composed of individual parts. When the phenomenon is viewed as a whole, the integration of individual parts to create and define the entire experience is recognized. Conversely, when the phenomenon is considered in terms of individual parts, the importance of the whole in contextualizing or illuminating each piece is recognized (Bontekoe). By circuitously viewing a phenomenon as a whole and as a sum of individual parts, the researcher gains knowledge to build increasing understanding of the experience.

In this project, hermeneutics was used to understand perspectives that international graduates and other stakeholders formed to make sense of the situations they face with the workforce integration process. A premise of hermeneutics is that people are self-interpreting and therefore engage in a process to understand what is important and real for them in order to create their own construction of reality (Koch, 1996). Consideration of the meaning of data from several sources and comprehending the fit of this information within the whole picture of acculturation experiences of international occupational therapy graduates was used to gain a growing understanding of the issues that affect workforce integration. Consistent with Heidegger's circle of understanding, new information was integrated with previous knowledge as the study progressed to create an enlightened view of the acculturation process.

## Dialogue

Gadamer emphasized the importance of dialogue between the researcher and the text for gaining knowledge and understanding (Koch, 1996). He suggested understanding could emerge only through deep immersion in the text, achieved through repeated readings and a recurring process of asking and answering questions of the information that explore new directions and possible answers (Aylesworth, 1991; Gadamer, 1981).

A shared understanding of workforce integration issues for international graduates was ultimately constructed in this study by analyzing and combining data from a broad

range of perspectives. Understanding emerged from reading and re-reading text and analyzing what was said in relation to the research sub-questions that explored the nature of issues affecting acculturation experiences.

### **Fusion of Horizons**

Gadamer also believed that researchers bring their expectations and meanings from their own frame of reference and past experiences to merge into a hermeneutic interpretation (Koch, 1996). He introduced the term *prejudice* to describe the values, experiences, or forestructures that unavoidably colour how an individual interprets experiences (Gadamer, 1975). The metaphor *fusion of horizons* was used by Gadamer to illustrate how prejudice merges with information from other perspectives to create new knowledge and understanding.

A horizon refers to the “range of vision that can be seen from a particular vantage point” (Gadamer, 1975, p. 269). Gadamer suggested that the interpretation of a phenomenon reflects the intersection of the vision of the researcher (past horizon) with the view of the text (present horizon) (Gadamer, 1975). This understanding involves *appropriation*, “making one’s own what was previously foreign” (Ricoeur, 1976, p. 91) to “bridge the gap between the familiar and the unfamiliar” (Paterson & Higgs, 2005, p. 346).

Claudia recognized that her experience with overseeing the national certification examination for occupational therapists provided important knowledge of some acculturation issues for international graduates that she wished to use to inform the study. This knowledge and understanding represented the past horizon at the start of the study. The hermeneutical situation represented the prejudices she brought into the study and “constituted the horizon beyond which it was impossible to see” (Gadamer, 1981, p. 272). A fusion of horizons occurred as new knowledge was gained through the interpretation of data collected throughout the study, ultimately resulting in a deep understanding of the acculturation process.

### **Research Design**

This study was conducted using a mixed methods design. A mixed method or multi-method design refers to the use of more than one investigative approach in a single study, resulting in the collection of more than one type of data (Morse & Richards, 2002). As in this study, the approaches that are combined often represent different types of paradigms, each with its own values and techniques that guide how research is conducted, analyzed, and reported (Creswell, 2003). Each paradigm reflects different philosophical beliefs regarding both how reality exists (ontology) and ways that knowledge is acquired about this reality (epistemology) (Higgs, 2001).

The use of different methods in this study was necessary to attain a comprehensive view of the barriers and enablers affecting the workforce integration of international occupational therapy graduates. Important aspects of the research problem may have been ignored by relying on a single approach. Mixed methods were also used in the study to strengthen the quality of the research findings. Triangulation refers to the gaining of multiple perspectives through different study approaches to the same topic

(Morse & Richards, 2002). Different research methods, researchers, data sources, and theoretical perspectives may be used to triangulate research findings (Miles & Huberman, 1994).

Quantitative approaches are located within the empirico-analytic paradigm. This paradigm reflects a positivist philosophy and seeks universal truths about reality that can be discovered using objective, reductionist, and quantifiable measurements (Higgs, 2001). In contrast, qualitative researchers believe that all people (including researchers) perceive and interpret reality differently. Rather than seeking a single objective truth, qualitative approaches explore multiple realities gained from different perspectives and interpretations to develop a deep understanding of issues (Hammell, 2002). Historically, qualitative methods were developed in reaction to what were considered shortcomings in how quantitative researchers perceived knowledge and the acquisition of knowledge. Because fundamental differences existed between qualitative and quantitative methods, many researchers felt that the two could not and should not be combined. However, limitations in using only single method have led to increasing interest in combining qualitative and quantitative approaches to address complex research questions. The resulting emphasis on developing procedures for enhancing the credibility of mixed method research has led to its general acceptance in the last few decades (Brannen, 1992; Smith & Heshusius, 1986).

Given their ontological and epistemological differences, both quantitative and qualitative approaches have unique uses and benefits. For example, quantitative methods are used to identify and measure variables to predict, control, describe, generalize, test hypotheses, and/or identify cause-effect relationships (Higgs, 2001). Qualitative approaches consider individuals within their social context and look beyond observable behaviours to develop insight into beliefs, value systems, and meanings ascribed to experiences (Hammell, 2002). The two approaches can therefore be used together to measure different or overlapping facets of a single phenomenon, producing a more holistic view of a phenomenon, and a greater depth of understanding of the issues under investigation (Creswell, 2003; Morgan, 1998). In this way, the successful use of mixed methods utilizes the strengths of one approach to enhance the performance of the other method (Morgan). Priority is given to a principal approach that has strengths most appropriate for meeting the study objectives. The second method is added to supplement this principal approach.

A review of the types of knowledge sought by this study led to the choice of hermeneutics as the principal approach. Situated in the interpretive paradigm, this type of qualitative research studies everyday experiences to gain knowledge through describing, illuminating, theorizing, or seeking meaning (Higgs, 2001). Interpretive studies seek to gain an understanding of the meaning of a lived experience. *Verstehen* is used to describe this understanding, a construction of reality that emerges from reflecting upon the interrelationships of a phenomenon with overall life experiences (Crotty, 1998; Dilthey, 1883/1988).

This study required an approach that could explore experiences of international occupational therapy graduates within the context of the wide range of issues that affect their workforce integration. It was recognized that no single reality could describe the breadth of acculturation experiences of all international graduates. Consistent with the



interpretive paradigm, the study's intent was to develop an understanding of the shared reality of the international graduates' many and diverse experiences.

Quantitative data gained from a survey of all international graduates that came to Canada between 2000 and 2005 was used to supplement the qualitative data gathered in other study phases. A sequential exploratory strategy was used that involved the use of quantitative results to assist with the interpretation of qualitative findings (Creswell, 2003). Qualitative data was gathered from international occupational therapy graduates and other stakeholders regarding their experiences and opinions of the acculturation process. The quantitative survey data provided contextual information for this data and was also used to recruit participants for qualitative interviews for a later study phase.

Integration of qualitative and quantitative methods occurred throughout the process of the study. For example, the two types of data were collected simultaneously by adding open-ended questions onto the survey that primarily used rating scales to solicit quantitative data. During analysis and interpretation, the quantitative results were transformed into a qualitative narrative that described the findings for comparison and integration with other study data.

### Study Phases

This study sought to understand Canadian workforce integration issues for internationally educated occupational therapists at many levels. Table 1 summarizes the desired level of knowledge, information source, and data collection method for each phase of the study.

**Table 1**  
*Knowledge Sought by Each Study Phase*

<b>Phase</b>	<b>Desired Knowledge</b>	<b>Information Source</b>	<b>Data Collection Method</b>
One	Recognition of potential enablers and barriers to the workforce integration of international occupational therapy graduates.	Research literature, organizational records, and policy documents.	Document review
Two	Identification of the social context of acculturation of international occupational therapy graduates.	Canadian occupational therapy regulators, educators, professional associations, and employers.	Telephone interview
Three	Recognition of the broad issues influencing the acculturation experiences of	International graduates who became registered to work as occupational therapists between 2000	Written survey

	international occupational therapy graduates.	and 2005.	
Four	Understanding of enablers and barriers to workforce integration for international occupational therapy graduates.	International graduates who became registered to work as occupational therapists between 2000 and 2005.	Face to face interview

### *Phase one*

In the first phase, a review of research literature and policy documents was undertaken to identify potential enablers and barriers affecting the workforce integration of international occupational therapy graduates. The research literature for occupational therapy and other regulated professionals was searched to obtain documents included in this study. In addition, reports from web sites of Canadian federal, provincial, and local government agencies as well as professional organizations, health providers, and policy groups both in Canada and internationally were reviewed .

### *Phase two*

Interviews were undertaken in the second study phase with Canadian occupational therapy regulatory organizations, professional associations, educators, and employers. The purpose of the interviews was to understand the roles of each of the different organizations in the acculturation process and to gain their unique perspectives regarding issues that may influence the workforce integration of international graduates. Telephone interviews that ranged in length from 30 to 90 minutes were conducted using a semi-structured format and transcribed for analysis. The interview questions were structured to obtain information relating to requirements to work in Canada, resources available to international graduates and workforce issues influencing employment success. Much of this information was factual data regarding program requirements and services, although some questions asked for the participant's opinion on particular issues (e.g., What do you believe is the greatest barrier for international graduates to work in Canada?).

### *Phase three*

A survey was undertaken in Phase three of all internationally educated occupational therapists registered to practice in Canada between 2000 and 2005 to gain an overview of acculturation experiences. The survey was designed to first obtain demographic information for a descriptive profile of participants regarding factors such as age, education, language, and location of settlement in Canada. Likert rating scales were then used to quantify subjective opinions concerning the nature of participant experiences with the acculturation process. Open-ended questions were included to allow participants the opportunity to add comments regarding their scored answers.

### *Phase four*

Participants in this study phase were selected from a pool of volunteers. Most of the participants provided their contact information in the written survey conducted in the third study phase to volunteer to be included in the interviews.

A purposeful maximum variation sampling method was used to select the participants. Purposeful sampling is a method of selecting participants that is directed toward showing different perspectives on a problem, process, or event that is the subject of study (Creswell, 1998). The aim is to use as diverse a sample as possible to study the wide breadth of the phenomenon. Maximum variation is dependent upon having a larger sample to understand the potential diversity of the phenomenon within the full population. It also requires definition of the range of characteristics that may be encountered in order to select the factors that will provide the most meaningful and diverse sample (Llewellyn, Sullivan, & Minichiello, 2004).

In this study, the information provided in the survey helped to select participants for the interview. Attention was given to selecting participants that varied among factors that created the largest differences in acculturation experiences, as identified through statistical analysis of the survey findings. Preference was also given to participants who included comments that provided new insight and offered constructive input for change.

In addition to these participants, four international graduates who had not met the selection criteria for the survey contacted Claudia and asked to participate in the interviews. They had been informed of the study by their friends or had read about the project in CAOT communications. In contrast to other participants, these individuals were not successful in being able to work as an occupational therapist in Canada. Because individuals that were marginalized from the profession may provide different insights into acculturation issues, these volunteers were selected to participate in an interview.

The interviews involved a face-to-face meeting, with the exception of two that were conducted by teleconference because of study time constraints. All interviews were transcribed and in addition, field notes were recorded after the sessions by the interviewer regarding new insights that had been gained from the participant.

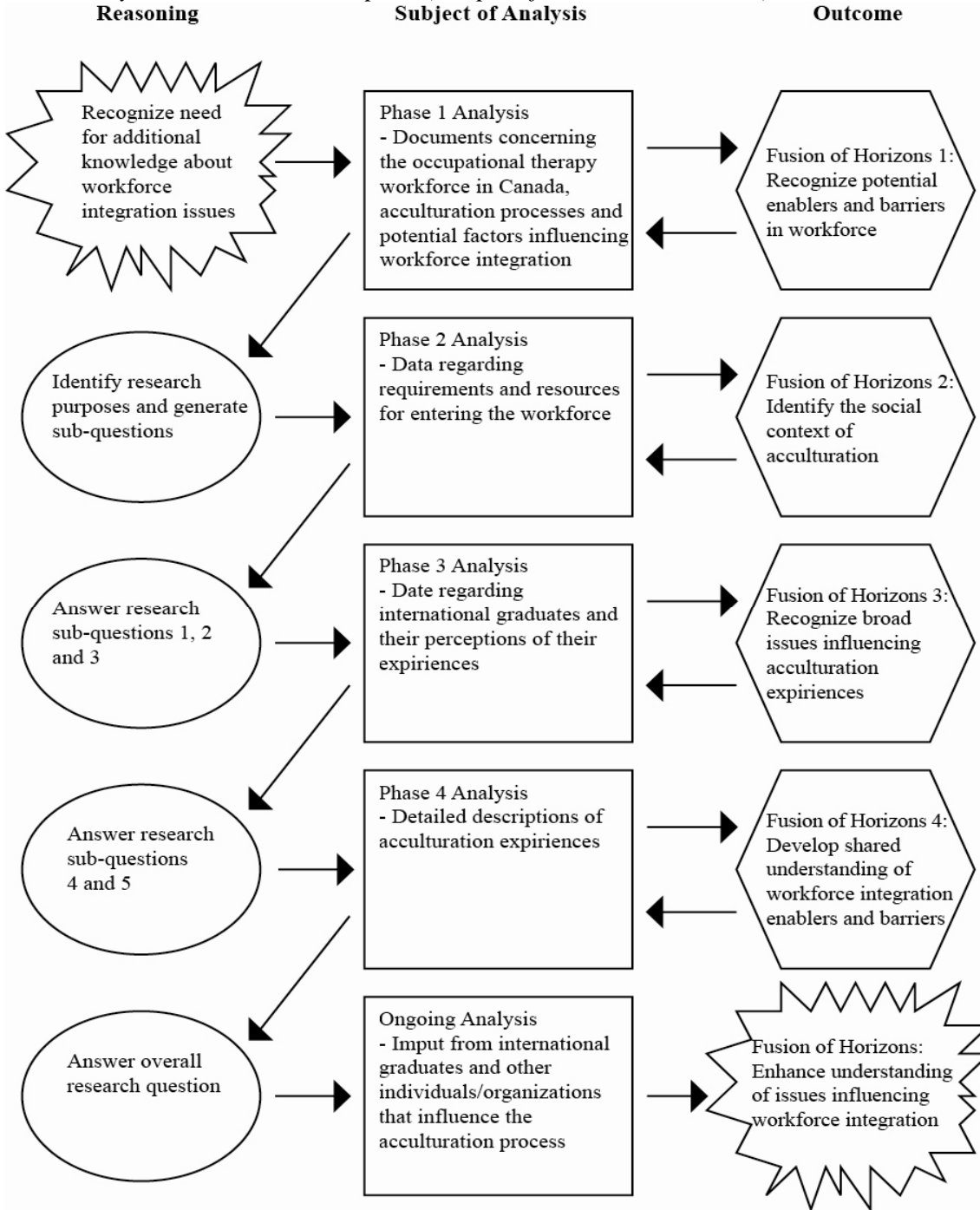
A non-structured approach was used to conduct the international graduate interviews to allow participants to tell their stories in the way most comfortable to them. Probes were used that followed from the course of the discussion. As described by Koch (1996), this type of questioning allowed participants to control the flow of conversation in order to describe their experiences. This approach is consistent with Gadamer's concept of dialogue, where open question and answers allow for discovery of new insights and ideas (Gadamer, 1975).

### **Data Analysis**

Analysis of the data collected in this study followed the hermeneutic spiral method first described by Margo in her work on professional judgment artistry (Paterson, 2003). This method integrates the constructs of dialogue, the hermeneutic circle, and the fusion of horizons to define a process for data analysis (see Figure 1).

**Figure One**

*Data Analysis: A Hermeneutic Spiral (adapted from Paterson, 2003)*



The reasoning process for analysis of the data evolved through the study phases. An initial recognition of the need for additional knowledge resulted in the identification of the research purpose and sub-questions at the end of phase one of the study. Data was then sought and integrated using dialogue with each of the sub-questions. By revolving through the hermeneutic circle at each level of the spiral, analysis alternated between seeking the meaning of individual parts of data with contextualizing this information

within the overall interpretation of acculturation processes and issues. A layering of new knowledge was created that developed progressively deeper insight into factors influencing workforce integration.

New knowledge was created in each phase as a result of a fusion of horizons. Pre-existing understanding of acculturation issues was “fused” or integrated with new information that had been gathered during the study phase. As an example, the first phase of the study was directed toward the interpretation of the gap between the horizon of knowledge Claudia brought from her past work experience and the information gained from the review of research literature and policy documents. A fusion of the past and present horizons in this study phase resulted in an enlightened understanding of potential enablers and barriers to the integration of international graduates into the occupational therapy workforce. In turn, the understanding of acculturation gained in phase one served as the past horizon for the next phase of the study (Table 2). The successive process of “fusing” the horizons of the past and present within each study phase resulted in a growing understanding of the acculturation process for international occupational therapy graduates.

**Table 2**  
*Horizons and Fusion Outcome for each Study Phase*

<b>Phase</b>	<b>Past Horizon</b>	<b>Present Horizon</b>	<b>Fusion Outcome</b>
One	Past researcher knowledge and experience.	Description of the occupational therapy workforce, acculturation processes, and potential factors influencing workforce integration.	Recognition of potential enablers and barriers to the workforce integration of international graduates.
Two	Recognition of potential enablers and barriers to the workforce integration of international graduates.	Opportunities and requirements for entering the occupational therapy workforce.	Identification of the social context of acculturation of international graduates.
Three	Identification of the social context of acculturation of international graduates.	Demographic profile of international graduates, their experiences, and perceptions of the acculturation process.	Recognition of the broad issues influencing the acculturation experiences of international graduates.
Four	Recognition of the broad issues influencing the acculturation experiences of international graduates.	Detailed information regarding acculturation experiences.	A shared understanding of enablers and barriers to workforce integration for international graduates.

## Phase One

The awareness of the need to gain new knowledge regarding the workforce integration of international occupational therapy graduates at the outset of the study grew from the work experience of Claudia as the primary investigator. Information collected in the literature review supplemented this knowledge and confirmed the importance of new initiatives to improve the success of international graduates with working as occupational therapists in Canada. Existing reports suggested that new immigrants to Canada increasingly experience lower rates of labour market participation. Issues from the literature identified as potentially influencing the work success of international occupational therapy graduates were thematically grouped using an acculturation framework first identified by Berry. This framework outlines the main types of factors affecting an individual's adaptation that need to be considered in research investigating acculturation, including individual and societal issues arising before and after arriving in a new home country (Berry, 1992). By mapping potential workforce integration enablers and barriers in relation to the four classifications of factors in this framework, the newly gained knowledge was used to articulate the five specific research sub-questions that together would frame the dialogue necessary to address the research problem (Table 3).

**Table 3**

*Workforce Integration Issues Identified in Relation to the Acculturation Framework*

	Societal Factors	Personal Factors
Factors Arising Outside of Canada	What international policy affects the mobility of occupational therapy graduates wishing to work in Canada? (Sub-question 1)	Who comes to work in Canada? (Sub-question 4)  What are the experiences of international graduates prior to leaving their homeland? (Sub-question 5)
Factors Arising in Canada	What domestic policy affects the mobility of occupational therapy graduates wishing to work in Canada? (Sub-question 1)  What resources are available to assist international graduates to work in Canada as occupational therapists? (Sub-question 2)  What workforce issues affect the ability of	What are the experiences of international graduates in integrating into the Canadian workforce? (Sub-question 5)

	international graduates to work in Canada as occupational therapists? (Sub-question 3)	
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**Phase Two**

To analyze the data collected from 35 stakeholders in phase two, the interview transcripts were initially read and re-read to gain an understanding of the overall messages conveyed by participants. Using QSR NVIVO 2 computer software, the data were then sorted to group together information gathered from regulators, educators, employers, and professional associations. This sorting was conducted for each of the research sub-questions. The grouped information was then read and re-read in order to understand organizational practices as well as identify themes of issues that influence the acculturation of international graduates. Reviewing the data in this manner provided the opportunity to look for areas of confirmation and inconsistency among the different sources of information. Themes generally emerged that reflected the major steps of the chronological process involved in acculturation. For example, issues relating to policies that influence acculturation included obtaining information regarding immigration and registration requirements, meeting language fluency standards, and passing the national certification examination.

To ensure an appropriate interpretation of the information was attained, the description of the findings of this study phase was shared with members of the project advisory committee, several of whom had been interviewed as participants. The project advisory committee supported the interpretation and representation of the findings and no revisions to the information were necessary.

**Phase Three**

In phase three, a 49% response rate was received for the written survey. The completed surveys from 105 internationally educated occupational therapists were first read individually to gain an understanding of the messages and experiences of the individual respondents. The survey responses were then entered into a computerized database program and the data sorted in relation to each of the research sub-questions. Data were statistically analyzed for the total sample responding to the questionnaire, as well as by sub-groups defined by variables such as province of first registration, country of entry-level education and language of instruction. The results of this statistical analysis was used to prepare a written narrative that described internationally educated occupational therapists working in Canada, their experiences, and their perspectives of the acculturation process. The narrative was supplemented by the qualitative information provided by respondents in the open-ended survey questions.

Consistent with the hermeneutic circle process, the meaning of the data from international graduates was considered both in isolation and within context of all the information gained in previous study phases. Alternating between the new data and previously known information led to a fusion of horizons that provided a broader understanding of issues influencing acculturation experiences. The themes identified by

international graduates were congruent with the information earlier provided by stakeholders, although their perspectives were sometimes markedly different. For example, while international graduates agreed with stakeholders that information was generally available regarding requirements to enter practice, they frequently indicated that their questions were not adequately answered by the material provided.

#### **Phase Four**

Data from interviews of internationally educated occupational therapists were analyzed in a similar fashion as stakeholder interviews. After a thorough reading and re-reading of the transcripts, NVIVO software was used to code and combine data from interviews and field notes in relation to each of the research sub-questions. Once again, themes emerging under each sub-question were consistent with past study phases, although much more detailed information was obtained regarding the issues identified. In addition, new themes emerged that were not identified in other study phases. As an example, international graduates discussed experiences with employer discrimination, an issue not previously recognized. Through analysis of themes and issues emerging from the combined data, a much more comprehensive understanding of workforce integration enablers and barriers was developed.

Member checks were used with each interview participant to ensure accurate interpretation of the findings. Comments received from the participants indicated a high degree of agreement with the interpretation of the information they had conveyed during the interview. No revisions were necessary in response to the feedback provided by interview participants.

Truth in hermeneutics refers only to the best informed and most coherent explanation on which there was consensus at a particular point in time (Kelly, 1996; Koch, 1996, 1999). Understanding is never considered to be final and fixed but always is expected to evolve (Gadamer, 1981). It is therefore expected that new information and insights from individuals and organizations knowledgeable about workforce integration can continue to enrich the findings of this study.

#### **Quality Considerations**

This research study was approved by the Queen's University Ethics Review Board. Accordingly, all participants in the study were assured participation was voluntary. Informed consent for participation was obtained from each stakeholder representative and international graduate who was interviewed in the study. Interview participants were identified only by a number code or pseudonym in all research materials to ensure confidentiality of individual responses.

A number of additional quality criteria were considered in this research to ensure the validity and credibility of the study findings. Krefting (1991) outlined four quality concepts that should be addressed in both qualitative and quantitative studies. These concepts include authenticity, neutrality, consistency, and applicability.



## **Authenticity**

Authenticity refers to the level of confidence that can be ascribed to the results of this study for describing the factors influencing the acculturation process for international graduates within their individual contexts (Miles & Huberman, 1994). In this study, new information gained from each study phase created a layering of new knowledge. Member checks used within each study phase provided the opportunity to review the authenticity of the findings as the study progressed. Authenticity was also enhanced by explaining the derivation of the study questions and rationale for the data collection protocol to the project advisory committee for their feedback and agreement.

The design of this study resulted in the collection of various types of data from many sources, using qualitative and quantitative methods. The use of these different approaches provided opportunity for triangulation for both confirmation and complementarity.

## **Neutrality**

Neutrality refers to the degree to which the findings of this study remained unbiased and reflected the actual perspectives and experiences of participants (Krefting, 1991). An advantage of the hermeneutic process was the accommodation provided for the preexisting knowledge that Claudia brought into the study while still maintaining neutrality of the study findings. Hermeneutics recognizes that the researcher brings prior knowledge and assumptions into the research process (Gadamer, 1975). As a research strategy, hermeneutics moves beyond description to interpret a phenomenon in light of previous knowledge and theories. The perspectives of researcher and the text become interlocked and findings emerge as a shared understanding of reality.

Several initiatives were undertaken to ensure that a broad viewpoint of acculturation issues emerged from the study and that the perspectives of participants were not unduly influenced by Claudia's role with CAOT. At the forefront, the hermeneutic spiral process was clearly outlined to recognize and manage Claudia's prior knowledge and experience in relation to interpreting workforce acculturation issues. Using field notes assisted with identifying potential biases and assumptions that arose when interpreting the data provided by participants. For example, it was important that Claudia not suppress feedback from international graduates regarding services provided by CAOT. Field notes were therefore shared with interview participants in phase four to ensure that their information was appropriately interpreted and conveyed. Attention was also given to obtaining data from a wide range of participants to balance the viewpoints obtained through Claudia's association with CAOT. Rather than selecting a small sample to interview in the second study phase, efforts were undertaken to obtain data from all stakeholder groups to ensure that all organizations could contribute to the study. Similarly, all internationally educated occupational therapists that came to Canada in the past five years were surveyed in the phase three of the study. In phase four, purposive sampling was used to choose international graduates for interviews that would provide diverse, information-rich descriptions of their experiences.

## **Consistency**

An evaluation of consistency determines whether the process of the study was “consistent, reasonably stable over time and across researchers and methods” (Miles & Huberman, 1994, p. 278). Hermeneutics provides both the science and the tools that are needed for consistent interpretation of findings. The constructs of the hermeneutic circle, fusion of horizons and dialogue, integrated into the hermeneutic spiral assist the researcher to consistently address the interpretation of a phenomenon. To promote consistency in this study, explicit procedures were also developed and used for selecting the participants for each study phase as well as for collecting and analyzing data. Checking reliability in following these procedures was facilitated by the use of a project assistant. The project assistant was responsible for implementing procedures that were developed and audited by Claudia. During the course of the study, the research process and findings were also reviewed by the project advisory committee as well as by Margo and other individuals with experience with qualitative methods.

## **Applicability**

Applicability refers to the degree that findings from research can be generalized to other contexts (Miles & Huberman, 1994). In this study, applicability relates to how well the research findings describe factors that influenced the acculturation of international occupational therapy graduates who did not participate in the project.

Findings of qualitative studies are generally less amenable to generalization as each participant’s situation is considered unique. To generalize the findings of this study to other international occupational therapy graduates, their fittingness with the context of the participants must be considered (Krefting, 1991). An essential element of hermeneutics is a thorough understanding of context and its influence upon a studied phenomenon. An understanding of the applicability of findings to other situations is therefore facilitated through the use of hermeneutics.

Attempts were made to strengthen the applicability of the findings of this research through the inclusion of a large and comprehensive group of participants in phase two and phase three in order to provide a broad picture of acculturation experiences and contexts in Canada. These findings outlined the context and characteristics of the experiences of international graduates that were explored in phase four.

## **Summary**

The application of hermeneutics in this study demonstrates the potential of this strategy for inclusion in mixed method approaches to address complex research questions. The nature of the research issue in this study required the use of both qualitative and quantitative methods to fully address the research question. The use of hermeneutics was chosen as the principal approach since an interpretive qualitative approach was needed to explore the multiple realities experienced by international graduates who wish to work as occupational therapists in Canada. The addition of quantitative data gathered through a survey provided access to information from a large sample of international graduates that provided the context for understanding

acculturation issues and experiences and assisted with selecting participants for interviews conducted later in the study. Hermeneutics articulates a process and direction for progressively integrating multiple sources and layers of experience and knowing. A creative and credible strategy was therefore provided for combining the use of qualitative and quantitative data in the study, described through the metaphors of dialogue, fusion of horizons and hermeneutic circle. Through dialogue, the collected data in each study phase was analyzed in relation to research sub-questions. The fusion of past horizons of knowledge with the new information gained through dialogue was understood in relation to the hermeneutic circle. The hermeneutic spiral described the process of progressively integrating the knowledge gained in the four study phases. Moving through the spiral created a layering of new knowledge and ultimately led to a deep understanding of acculturation issues for international occupational therapy graduates. This understanding allowed the identification of important areas for future action needed to promote the integration of international graduates in the Canadian occupational therapy workforce.

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