Teachers’ Perceptions of their Cultural Competencies:
An Investigation in the Relationships among Teacher Characteristics and Cultural Competence

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Dedication

This project is dedicated to my past students, from whom I have learned more about the world and myself than any book could ever teach. I would also like to thank Andrew for supporting me through this process, and ensuring that the dishes were cleaned every night, when I was too busy to stay on top of house work.
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Abstract

The purpose of this study was to explore the relationships between teacher characteristics and cultural competencies in teachers. Participants were 120 teachers enrolled in graduate courses in the Faculty of Education at Mount Saint Vincent University, in Halifax, Nova Scotia. They completed a survey designed for this study, titled the Teachers’ Perceptions of their Cultural Competence and a demographic survey. Teachers were divided into a number of groups based on the following teacher characteristics: sex (male, female); highest degree obtained (Bachelor, Masters); experience (novice – nine or less years, veteran – ten or more years); school level (elementary, secondary); subject (arts, sciences); courses with a cultural competency focus completed (no courses, at least one course); and professional development workshops with a cultural competency focus completed (no workshops, at least one workshop). Teacher characteristics were compared to the three different types of cultural competencies examined (awareness, knowledge, and skills) (Sue, 1989). Findings indicated significant differences among the types of cultural competencies, when compared with all teacher characteristics and main effects of sex, school level and workshops. Also, it was determined that school level and workshops accounted for most of the variance in total cultural competency scores and skills competency scores.
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Chapter 1

Introduction

General Introduction

As the diversity of students within Nova Scotia populations continues to grow, so does the need for teachers to possess culturally competent practices in their lesson plan formation, assessment development and interpretation, daily interactions with students and overall classroom environment. Teachers’ cultural competence is becoming an increasingly important part of systems of educational curriculum delivery. The movement toward systems of education that focus so intently on culturally competent practices is with the hope of benefiting teachers and students. However, it is difficult to determine how to assess cultural competence within educational systems if the researcher is uncertain about what constitutes cultural competence. A multitude of terminology has been used over the last twenty years, and across a number of different disciplines, to describe models and practices that are considered culturally competent. A lack of clarity surrounding the conceptual meaning of cultural competence should cause one to question the constructs that underlie the models used by researchers in this field. The following literature review will help to situate the reader in a position to gain an understanding of cultural competence used in this study.

This review was important to developing the conceptualization of cultural competence used in this study. As Dei (1996 as cited in Dei, 2000) reminds us “research is governed by ideological perspectives that precede the research process”. To initiate research without an understanding and operationalized definition of the terms in question, is to engage in research that could be potentially biased. Research and interpretation should not be seen as completely neutral because they are influenced by the social, political and life experiences of the researchers.
and participants (Dei, 2000). For the purposes of this study the researcher combined many of the principles of cultural competence gathered during the literature review, into an integrated framework designed to define cultural competence as it applied to the educational research being conducted. The understanding of cultural competence underlying this study was based on concepts from the following literature, and is thought of as a point on a continuum that represents the abilities (described as awareness, knowledge, and skills) that enable a person to interact effectively in a culturally diverse environment, and encourage others to develop these capabilities.

The Importance of Culture in Education

*How culture is connected to learning.* The following section will highlight the importance of understanding the connection between learning and culture. A student's particular learning style is a combination of the strategies utilized by that student to learn tasks, new skills and organize educational material. Few researchers will dispute that there is a direct connection between culture and a student's preferred way of learning which in turns affects the student's academic, social and emotional achievement (Guild, 1994). By examining how students' cultural backgrounds are connected to learning styles educators may be able to better understand how culture interacts with socioeconomic factors, racism and social inequalities (Kai, Spencer, Wilkes, & Gill, 1999). The increasingly diverse nature of classrooms increases the responsibility of teachers to ensure that all students receive equal opportunities to learn in the classroom. In order to do this, teachers must take into account the diverse backgrounds, needs, and learning styles of student's from varying cultural backgrounds to successfully provide multiple learning environments (Phuntsog, 2001). The instructional methods that teachers implement in the classroom should be based on an understanding of the ways that particular students learn (Guild,
1994). However, despite the fact that culture may influence learning styles, there is still a wide range of variation within cultural groups, which requires teachers to draw upon a variety of teaching strategies for all students. When putting this research into practice, teachers must be vigilant about generalizations about individual students' preferred way of learning based on a particular culture as a whole, and to remain cognizant of the diversity in learning styles among members of a particular culture, keeping in mind that all children from a particular cultural group do not learn in the same way (Guild, 1994; Fierro, 1997).

While examining the influences of culture on learning and assessment, Demmert (2005) wrote,

> If culture influences an individual’s view of the world, if cultural experiences determine how one approaches a problem and attempts to solve it, if the cultural environment influences the way a person thinks and approaches life, and if early experiences and our environments significantly influence what we become as individuals, then clearly issues of culture, language, cognition, community, and socialization are central to learning. (p. 18)

It is generally accepted that learning styles are related to both nature and nurture, and that no one learning style is better than another; however, greater understanding of how shared cultural experiences could be connected to learning is needed in order to better understand why students belonging to diverse backgrounds tend to have different preferred learning styles (Guild, 1994; Fierro, 1997).

Since most educational decisions regarding curriculum and instruction are made based on how they will impact students' learning, it is essential for educators to analyze information about
culture and learning styles by implementing the concept of multicultural education, in order to attain the goal of providing equal learning opportunities for each student through the development of a culturally responsive pedagogy (Guild, 1994; Phuntsog, 2001).

*Why teaching about culture and cultural outcomes is important.* Learning about and respecting diverse perspectives puts client needs at the center of professional-client relationships and can lead to effective alliances and communication, which result in the validation of client backgrounds and more effective service delivery (Kai et al., 1999). At times culture can be so closely connected to who we are, we can forget that not everyone has the same cultural background, but by learning about diverse cultures and developing an awareness of their own attitudes and values, students can be prepared to interact positively and sensitively with people from diverse backgrounds in a multicultural society (Wan, 2006; Kai et al., 1999).

Teaching directly about culture can lead to benefits in student development such as: challenging one's own worldview and the generalization of undesirable characteristics attributed to every member of a culturally distinct group; an awareness of when cultural differences are being trivialized; the ability to shift into two or more rather complete cultural world views and the ability to interpret themselves in various cultural ways (Bennett, 1986). By interpreting events in accordance to these culturally sensitive developments, the effectiveness of students' intercultural sensitivity and communication increase, which can develop into productive interactions in a pluralistic society.

*Cultural competence*

Cultural competence has been defined in many ways, using a variety of conceptualizations and building on a number of frameworks. The idea of describing cultural
competence as the collection of three levels of competence: attitudes/beliefs, knowledge, and skills as they are applied to working with ethnically and culturally diverse groups has become one of the founding conceptualizations for the development of cultural competence definitions. This way of thinking led to the development of multicultural counselling competencies (MCC), which were originally designed as a set of guidelines for service delivery with diverse groups. (Sue, 1992; Sue et al., 1982; Sue et al., 1998). The three components described in this founding model of cultural competence have been analyzed, expanded upon and refined by a number of researchers for use in a variety of fields, including healthcare, mental health, business, social work and education. The following is a general summary of the components included in this model.

Attitudes and beliefs have been referred to as cultural awareness. This is defined as the awareness of one's own cultural heritage, values, and biases. This also includes an awareness of how these dimensions affect interactions with diverse groups (Sue et al., 1982). Cultural knowledge includes appreciation and respect for difference in other cultures. Acquisition of specific knowledge regarding diverse groups is included in this area (Sue et al., 1982). Cultural skills are behaviours that illustrate culturally sensitive interactions with diverse groups (Sue & Sue, 1990 as cited in Pope-Davis & Toporek, 2003). This hierarchical concept of multicultural competence (awareness, knowledge, skills) has been used to describe a culturally competent person as someone who “possesses the cultural knowledge and skills of a particular culture to deliver effective interventions to members of the culture,” (Sue, 1998). Additional components of cultural competence have been identified since the use of this model became widely drawn upon by various professions. An example of one of these additional components is referred to as cultural relationships (Sodowsky & Taffé, 1991). This component includes the ability to
integrate the previous three areas into effective and appropriate relationships with culturally
diverse groups (Pope-Davis & Toporek, 2003). Another example of an addition to the original
conceptualization of multicultural competence includes the ability to engage in action that
maximizes the development of not only individual clients, but also of the organizational
structures of client systems within a pluralistic democratic society (Sue & Torino, 2005).

These guidelines for culturally competent practice have been further developed using the
Dimensions of Personal Identity model, which describes persons practicing cultural competence
as cognizant of a number of different dimensions affecting identity (Arredondo & Glauner, 1992;
Arredondo, 1999; Delphin & Rowe, 2008). Following this model dimensions of personal
identity, rather than components of multicultural competence, are divided into three different
levels based on the amount of individual control and context associated with each dimension.
Factors such as race, age, and gender, which are outside individual control, are referred to as A
dimensions. The social, political, economic, and historical contexts of individual life are referred
to as C dimensions. Factors that are within individual control, but are influenced by the social,
political, economic, and historical contexts, such as education, marital status, religion and
spirituality and geographical location, etc. are referred to as B dimensions (Handbook of
Adoption, 2006).

Cultural Disparity and Service Modification. Differences in access to appropriate need
based services among different cultural groups have been a concern in a number of professional
fields. The processes involved in client-professional relationships have lead to the development
of a working conceptualization of cultural competence that includes a number of different
abilities, which demonstrate that a person is able to move between two cultural perspectives
(Lopez, 1997). This ability to take on, and understand different perspectives is a necessary
component of problem-solving and understanding the needs of diverse groups of people (Lopez, 1997). To provide for clients in a culturally individualized manner many important conceptualizations of cultural competence require professionals to engage in reflective practice regarding their own cultural background and experiences and to acknowledge the importance of culture and the implications of cultural differences (Suh, 2004; Betancourt, 2003). In this sense, cultural competence can be thought of as a “fundamental schema, rather than a matter of fact,” that requires professionals to adapt their perceptions and way of thinking over time and after interactions with diverse groups (Suh, 2004). Cultural competent practices include the ability to implement strategies to address and resolve racial and ethnic disparities (Suh, 2004; Betancourt, 2003). The elimination of cultural disparities is possible through practice that is based upon a framework of organizational, structural, and clinical cultural competence interventions; however, this is not possible without acceptance, respect and nonjudgmental attitudes toward diverse cultures and cultural attributes (Suh, 2004; Betancourt, 2003). By being flexible within one’s practice professionals can learn to adapt to different situations which results in measures to address disparities and improved care (Suh, 2004; Betancourt, 2003).

An important principle of cultural competence that is important in enhancing the quality and appropriateness of services delivered to diverse groups of people is awareness that cultural competence is not the mere acquisition of cultural knowledge, for example being aware that stereotyping is part of human perception is not sufficient, this process must be challenged (Delphine & Rowe, 2008; Mennuti et al., 2006). This idea emphasizes that the gathering of facts regarding different cultural groups or processes of intervention, is not sufficient preparation for professionals working with diverse groups because that does not instil in one an ability to understand the meaning of any given cultural expression (Mennuti et al., 2006). Instead, it is
necessary for professionals to understand how interventions interact with diverse cultures, in addition to simply having the skills to implement an intervention through knowledge from and about individuals and groups; integrated and transformed practices that match the cultural experiences and traditions of clients are required (Mennuti et al., 2006; Delphine & Rowe, 2008). In order to successfully accomplish this task, professionals need to consider the development of culturally competent practices not as a point at which one stands still, but as a conscious, ongoing process. One through which the development of skills and knowledge related to the interactive process that occurs between services and interventions are always applied when considering the population to whom they will be given (Mennuti et al., 2006; Delphine & Rowe, 2008; Whaley & Davis, 2007).

Picking up on the idea of conscious cultural competence, Purnell (2002) has developed a more cyclical model of cultural competence that includes interactions with diverse groups that are consistent with their culture. The cultural domains used in this model were constructed from the combination of the following cultural characteristics: educational status, socioeconomic status, occupation, political beliefs, urban versus rural residence, marital status, parental status, physical characteristics, sexual orientation, gender issues, and immigration status (Purnell, 2002). This model can be illustrated through a number of concentric circles. Global society is represented in the exterior of the first circle. The second circle represents community, the third circle represents family and the inner circle represents an individual person. The center of these circles is divided into 12 wedges, depicting different cultural domains. These wedges are not separate constructs; rather each cultural domain is affected by, and related to all the others. Some examples of these cultural domains include: spirituality, communication, family roles and organization, heritage, and biocultural ecology. This circular model of cultural competence can
fall anywhere along a line representing the concept of cultural consciousness: unconsciously incompetent, consciously incompetent, consciously competent, and unconsciously competent.

Combining information about how culture shapes learning, the implementation of skills, and the importance of providing evidence based practices congruent with diverse cultural groups into professional service delivery are all necessary processes for developing cultural competence. Cultural competence requires an understanding of how culture shapes behaviour, and the ability to use cultural knowledge to assess and intervene in the most effective way for a particular individual (Whaley & Davis, 2007). This idea reinforces the need to consider possible modifications to service delivery, in the same way it is necessary to consider how learning style may necessitate modifications to instruction in order to make appropriate cultural adaptations.

Educational Cultural Competencies. One of the theoretical benefits of cultural competence is its connection to inclusive schooling. Inclusive schools are dynamic, purposeful, and inviting places, which embrace anti-racist education in order to provide equitable educational outcomes for all students (Dei, 2000). Inclusive schools demonstrating cultural competence will have the necessary awareness, knowledge and skills to provide instructional opportunities that include respect and educate all students, through practices that are congruent with that particular child's cultural background. Anti-racist educational practices examine how social institutions have pushed minority voices, experiences and histories to the periphery of educational curriculum through perpetuation of racial, gender, sexual and class-based inequalities (Dei, 2000). Through these practices schools can develop educational models that are more inclusive and readily able to respond to the concerns and aspirations of a diverse population (Dei, 2000). Anti-racist educational practices also examine how “educational institutions respond to the challenge of diversity and difference: that is, the socially constructed
intersections of race, gender, class, sexuality, language, culture and religion” (Dei, 1996 as cited in Dei, 2000) through schools that represent and include diverse perspectives.

The integration of cultural competencies and anti-oppressive education can be arranged into four domains. The first conceptualization of anti-oppressive education is a focus on implementing culturally competent skills at a system level by improving experiences of students who have been harmed through discrimination, harassment, violence, and exclusion. To improve conditions for students, schools must transform into places where all students will be safe and have their concerns responded to, regardless of their cultural background (Kumashiro, 2004).

The second conceptualization of anti-oppressive education focuses on assessing the knowledge students already have, and will receive, regarding people who are labelled as different. Schools can utilize culturally competent practices by introducing students to a variety of perspectives, which will broaden students' understanding of different groups and combat the potentially harmful partial knowledge that students may have regarding people from different racial backgrounds, gender identities, and religions, etc. (Kumashiro, 2004). The third conceptualization of anti-oppressive education uses culturally competent practices to increase awareness, by examining the ways in which society favours, or marginalizes, certain groups. Schools must enable students to critique, and resist the racial hierarchies, gender stereotypes, heterosexist culture, religious norms, and other social constructs that are often behind the maintenance of oppressive social dynamics (Kumashiro, 2004). The fourth conceptualization of anti-oppressive education examines the resistance toward alternative interpretations of, and interactions with, the diverse groups around us. Schools must encourage students to work toward change by reflecting on personal desires and resistances, and increasing their knowledge of diverse groups (Kumashiro, 2004). Like Delphine and Rowe's (2008) conceptualization of
cultural competence, these theories of oppression and practices to challenge oppression, are based on the premise that the work is never finished.

**Cultural competence and teachers**

Regardless of teacher training experience, cultural competence still has not found its way into routine practice in public schools (Ortiz & Flanagan, 2002 as cited in Mennuti et al., 2006). Different cultures socialize children through different forms of behaviours, values, and learning. A lack of understanding or a misunderstanding of differing day-to-day practices could discourage children by invalidating their cultural practices. Teachers run the risk of incorrectly identifying students or underestimating their academic potential through behaviours they may not understand. Solano-Flores & Nelson-Barber (2000) use the example of a child whose culture teaches that long verbal interactions should be discouraged and showing how much you know is considered inappropriate. A teacher lacking cultural competence may assume the child is non-verbal or has a poor command of the topic (Solano-Flores & Nelson-Barber, 2000). The socialization process of children influences the way in which students interpret test items which could privilege students from similar cultural groups, while at the same time penalize students from diverse backgrounds (Solano-Flores & Nelson-Barber, 2000). The importance of teacher cultural competencies is derived from the understanding that a lack of cultural awareness may affect the way teachers evaluate students’ academic performance (Solano-Flores & Nelson-Barber, 2000). The particular way in which a teacher develops and administers assessment tools, or includes students in learning opportunities that are consistent with their cultural background, may not accurately reflect student progress and ability if socio-cultural factors are not taken into account. Since qualifications for some student services programs (i.e., severe learning disability programs) are based on psycho-educational assessments and grade level achievement, it is
important that teachers are competent in accurately measuring the academic ability of a diverse population of students. Outcome achievement can not accurately be assessed if teachers are engaging students with either overt or covert cultural incompetence.

At a time when the student population in the provincial area is diversifying rapidly, studies examining schools with similar compositions to local schools are of particular interest. Specifically, research related to schools where the heterogeneous diversity of the city is represented in one school, creating large, diverse school populations are of interest. In an effort to examine what students in diverse schools learn both in specific content areas and in life skills preparation studies have observed the environment within schools with diverse populations which attempt to use socio-economic desegregation to preserve racial and ethnic diversity in a time when policies based on race may be limited (Civil Rights Project, 2002). It is important to note that although desegregated schooling cannot guarantee that teachers are utilizing the curriculum in a manner that recognizes diversity, is fair to all groups, or reflects positive interactions between different groups of students, it does contribute to an environment in which student learning, peer interactions and perceptions of support by the school can be enhanced through the use of curriculum (Civil Rights Project, 2002). Using the Diversity Assessment Questionnaire (DAQ) students were asked how often racial issues were discussed and explored in social studies courses (DAQ, Q8). Eighty-one percent of all students reported that these issues were included by their teacher in the social studies curriculum 1 to 3 times a month, with a range between 70% and 92% among numerous self-identified racial groups. Students were given a follow-up question asking them to indicate to what extent these discussions had changed their understanding of different points of view (DAQ, Q9). Forty percent of the overall student population indicated the discussions had significantly impacted their point of view, while only
six percent of students indicated that these discussions did not impact their point of view. This figure shows that although nearly all students are influenced to some degree by the discussion and exploration of racial issues, there are still a large percentage of students that were not significantly influenced by these discussions. Students were also asked to indicate to what degree teachers encouraged them to work with students of other racial/ethnic backgrounds (DAQ, Q24). Forty percent of the overall student population indicated that teachers encouraged them to work with students of other racial backgrounds. For most racial groups less than half of the students felt that they were highly encouraged by their teachers to work with a diverse group of students. This finding indicates that there was much room for improvement among teachers in their active involvement to create and encourage multicultural groupings within classrooms. In an attempt to measure some regard of student-teacher interactions students were asked to indicate whether at least one of their teachers had taken a special interest in them. Seventy-seven percent of the overall student population indicated that at least one teacher had taken a special interest in them, with a range between 73% and 81% among numerous self-identified racial groups. This finding indicated that all student groups were finding teachers to connect with at equal levels. The Civil Rights Project (2002) showed that teacher cultural competence can affect how students perceive their teachers by looking at student perceptions of teacher cultural competence. Although perceptions of cultural competence within school settings can be measured in a number of ways the focus of the current study was on teachers' perceptions of their cultural competence.

Determining teachers' awareness of what constitutes cultural competence is an important step in developing culturally competent practices for the classroom. When determining how teachers believe they implement cultural competencies into their practice, it is important to understand what issues teachers believe are of cultural importance within schools. Studies have
examined teacher perceptions of multicultural issues in school settings by analyzing their level of cultural understanding and perception of preparedness to teach students in both an academically stimulating and culturally sensitive way (Martines, 2005; Henkin & Steinmetz, 2008). It has been found that although teachers were competent in demonstrating cultural awareness and were able to identify strategies of using culturally competent practices in their classrooms, they were less competent in implementing culturally competent knowledge and skills, and unable to justify or elaborate on the process of implementing those practices into their classroom. (Martines, 2005; Henkin & Steinmetz, 2008). This indicates that teachers are aware of multicultural issues and teaching techniques, but fail to understand how to use the necessary skills to implement practices in response to these issues.

Despite having completed teaching programs rich in diverse cultural experiences teachers were unable to internalize, articulate, and implement higher level cultural competence practices into their own careers, possibly because of demanding schedules, lack of cultural competence implementation training, lack of administrative support, or lack of motivation to implement the associated skills (Martines 2005; Henkin & Steinmetz, 2008). This result shows that although current culturally competent teaching programs are essential; they are not sufficient to produce culturally competent teachers. This is further justification for the need of the research to investigate how both novice and veteran teachers perceive their culturally competent practices.

In response to the trend of teachers having less proficiency with culturally competent skills, compared to culturally competent awareness, teachers may benefit from attending cultural competence training programs. Changes in teachers’ knowledge of cultural diversity, teaching skills and ability to build more positive relationships with culturally diverse students are possible after completion of multicultural education and training (Bell, 2005; Gorham, 2001). As a result
of becoming highly aware of personal biases and working to reintegrate behaviour into culturally competent practice, teachers are likely to see an initial decrease in self-perceived cultural competence in teacher-student relationships; however, after teachers proceed through an initially awkward period of restructuring behaviour, they are able to engage in more culturally competent relationships with their students (Bell, 2005). This is support for the need to highlight and correct teachers’ multicultural incompetence early in their careers in order to ensure they are practicing cultural competence for the longest period possible. For novice teachers, this means becoming aware of personal biases and making necessary adjustments during their training. For veteran teachers, this means becoming aware of personal biases and making necessary adjustments as soon as possible. It is difficult for teachers to make necessary changes in behaviour toward culturally competent practice if they are unaware of their own personal biases.

Findings have indicated that overall teachers feel at least somewhat competent in many components of cultural competence including: knowledge about cultural diversity and research reflecting the instructional needs of diverse student groups, and the use of effective strategies to teach minority students (Holcomb-McCoy, 2005; King, 2004). However, the more education a teacher receives in regards to culturally competent teaching leads teachers to report a higher respect for cultural diversity, higher levels of perceived cultural competence, higher levels of preparedness about working with culturally diverse students, and engagement in higher levels of combating prejudice at school (Gorham, 2001; Holcomb-McCoy, 2005). Although these results appear promising, school staff must be cautious not to make assumptions that this research indicates that teachers are implementing culturally competent practices after training, as the extent to which perceived cultural competence transfers to skills utilized in practice is unknown (Holcomb-McCoy, 2005).
Studies measuring the perceived preparedness of teachers to teach culturally and linguistically diverse students have found that the majority of teachers felt highly competent to teach culturally diverse student populations; however, teachers indicated that growing up with personal backgrounds that exposed them to culturally diverse populations lead to feelings of greater competence to teach culturally diverse student populations, than growing up in monocultural or homogeneous populations and teachers felt most competent to teach students who were members of their same racial group (Kea, Trent, & Davis, 2002; Gorham, 2001). Teachers also indicated that they had more interactions with students from similar backgrounds, and were more aware of contributions of people from this group. Teachers indicated that they had moderate to great cultural understanding and knowledge of African American and White students, but indicated that their multicultural understanding of Hispanic, Native American, Asian American, and Middle Eastern students was limited (Kea, Trent, & Davis, 2002). When one considers the culturally diverse make up of Nova Scotia, and the growing number of Black, Aboriginal, Arab, and Asian Canadians (Statistics Canada, 2001), this is further reason to research the differences in teachers’ perceived cultural competencies toward specific cultural groups. Teachers need to be given opportunities and resources to integrate awareness and knowledge into skills of practice through ongoing assessment of culturally competent practice, reflection and analysis of student performance through bias-free assessment measures, professional development opportunities to learn how to embed transformative and social action activities into their classroom and access to resources with culturally diverse content (Kea, Trent, & Davis, 2002; Gorham, 2001).

In order to accurately measure students’ progress teachers must be competent enough in their cultural knowledge and skills to develop assessment methods that are free of racial (and
other) biases, and have ensured students have had equitable opportunities to learn the tested material. Failure to produce such valid classroom assessments could lead to an under-representation of diverse students’ achievement. Standardized tests alone are not sufficient for measuring student achievement, nor would it be valid to use them solely to make decisions about school policy and governance (Race and Public Policy, 2002). Due to the achievement gap between students who are culturally diverse and students from mainstream culture on standardized tests, teachers must be capable of using assessment measures in their classroom that are more indicative of true student performance and ability. Teachers must utilize culturally competent practices in order to inform their interpretation of assessment results, which traditionally do not represent bias-free testing or make the necessary adjustments to accommodate students’ diverse backgrounds.

_Cultural competence and local documents_

The importance of cultural competence can be seen at the Provincial level as well. The following documentation illustrates the need for teacher cultural competence through provincial principles and curriculum. In Nova Scotia school boards _The Principles for Fair Student Assessment Practices for Education in Canada_ (1993) has been incorporated into policy framework for fair and equitable assessment practices. Of particular significance here, are two principles outlining the importance of cultural considerations during classroom assessments.

_Assessment methods should be free from bias brought about by student factors extraneous to the purpose of the assessment. Possible factors to consider include culture, developmental stage, ethnicity, gender, socio-economic background, language, special interests, and special needs. Students' success in answering questions on a test or in an oral quiz, for example, should not be dependent upon_
prior cultural knowledge, such as understanding an allusion to a cultural
tradition or value, unless such knowledge falls within the content domain being
assessed. All students should be given the same opportunity to display their
strengths. (p.4)

Following the development and administration of assessment, the interpretation of assessment
tools needs to take into account the background and learning experiences of the students.

Assessment results should be interpreted in relation to a student's personal and
social context. Among the factors to consider are age, ability, gender, language,
motivation, opportunity to learn, self-esteem, socio-economic background, special
interests, special needs, and "test-taking" skills. Motivation to do school tasks,
language capability, or home environment can influence learning of the concepts
assessed, for example. Poor reading ability, poorly developed psycho-motor or
manipulative skills, lack of test-taking skills, anxiety, and low self-esteem can lead
to lower scores. Poor performance in an assessment may be attributable to a lack
of opportunity to learn because required learning materials and supplies were not
available, learning activities were not provided, or inadequate time was allowed
for learning. When a student performs poorly, the possibility that one or more
factors such as these might have interfered with a student's response or
performance should be considered. (p.11)

The Nova Scotia Department of Education Racial Equity Policy (2002) supports the
development of a curriculum that is sensitive to all learners. An equitable curriculum is defined
as including, “teaching practices that acknowledge that language learning develops out of
students’ home language and their social and cultural experiences” and is implemented through “pedagogic approaches that encourage learners to communicate effectively without obscuring or submerging their racial and cultural identities (Racial Equity Policy, 2002). In order to ensure the curriculum is implemented through methods that follow the Racial Equity Policy, the Department of Education strives to work in partnership with school boards. This partnership focuses on developing and supporting “classroom instructional practices that accommodate the cultural background, experiences, perspectives, learning styles and needs of all learners”, and to “ensure that all assessments and evaluation practices are developed with consideration to the needs of Aboriginal, racially visible, and culturally diverse learners and in accordance with the guidelines articulated in the Principles for Fair Student Assessment Practices for Education in Canada” (Racial Equity Policy, 2002).

The Nova Scotia Department of Education also encourages teachers to “collaborate with learners, parents, and others…to develop instructional evaluation practices: that help all learners to achieve their potential…and that are respectful of their racial identity and cultural heritage” (Racial Equity Policy, 2002). Without reflective thinking it is difficult to be aware of the limitations to one’s own competencies. Without awareness of these limitations it is difficult for teachers to implement a curriculum that is theoretically bias-free. In an effort to overcome this challenge the Department of Education also works in partnership with school boards to “develop and implement professional development to enhance the teacher’s ability to utilize the principles contained in” the Racial Equity Policy (2002).

If teachers never become aware of their own cultural competence limitations, damage to the relationship between student-and-teacher can occur. However, in addition to this already concerning situation is the teacher’s inability to effectively teach curriculum outcomes that are
centered on respect for diversity. In this scenario students are double-penalized: once for the negative relationship that develops and again when the teacher’s lack of cultural competence prevents the accurate teaching of outcomes. If classroom instruction is lead by a teacher lacking cultural competence the Essential Graduated Learnings (EGL) (Province of Nova Scotia, 2003b) may not be reached within the classroom. It may be difficult for a teacher, who is unaware of their own biases, to teach students to “examine human rights issues and recognize forms of discrimination” or to “demonstrate an understanding of their own and others’ cultural identity and the contribution of multiculturalism to society” (Citizenship EGL). It may also be difficult for that teacher to model for students how to “reflect critically on ethical issues” (Personal Development EGL). The achievement of other curriculum outcomes potentially inhibited by a culturally incompetent teacher can be found throughout numerous curriculum guides.

According to the local English Language Arts (ELA) curriculum students need to be exposed to literature of their own and other cultures through the use of a range of texts through which students can hear diverse social and cultural perspectives (Province of Nova Scotia, 1997; Province of Nova Scotia, 1998). This process will help students understand how language and communication can help preserve and enrich a variety of different cultures. Teachers are also responsible to create an environment where ELA can be taught with an acknowledgement of the ways in which gender, race, ethnicity, and culture shape particular ways of viewing and knowing the world. By the end of grade 9 students are expected to be able to “demonstrate awareness that spoken language has different conventions in different situations and cultures, and use language appropriate to the situation” (Key-Stage Curriculum Outcomes, Speaking and Listening). During the progression from grade 7 to 9 students are also expected to “demonstrate respect for others by developing effective ways to express personal opinions such that they reflect sensitivity to
others including differences in culture and language” (Specific Curriculum Outcomes Grades 7-9, Speaking and Listening). By the end of grade 9 students will also be expected to “explore and reflect on culture as portrayed in media texts” (Key-Stage Curriculum Outcomes, Reading and Viewing). Upon entering high school students are asked to expand their understanding of these outcomes. Students are expected to “evaluate ways in which both genders and various cultures and socio-economic groups are portrayed in media texts,” as well as “discuss ways in which people can show respect for other cultures and points of views by what they say and their body language (e.g., in the context of a visit to an unfamiliar place, participation in a multicultural event)” (Specific Curriculum Outcomes Grades 10-12, Speaking and Listening). These outcomes demonstrate an awareness of highly reflective skills and analysis on the part of the student; however, if students are never exposed to diverse literature because of a teacher’s underlying covert or unidentified bias it will be difficult for students to reach these outcomes.

Throughout the local social studies curriculum (Province of Nova Scotia, 2006) students are asked to demonstrate both direct and indirect understanding of culture. In grade 8 students begin with the expectation to “examine and develop a general concept of culture” (Specific Outcome 2.1). As their understanding progresses students are expected to make connections between their own and other cultures, to gain an understanding of the nature of culture, ethnic, and linguistic groups in Atlantic Canada, as well as the issues and events surrounding cross-cultural understanding at micro and macro levels including forces that cause continual change among differing cultures (Specific Outcome 2.2, 2.4, 2.5, 2.7). A teacher with little understanding and appreciation for the strengths within cultural differences may find themselves struggling to convey the importance of these outcomes. Since students are often acutely aware of
the non-verbal, somewhat concealed, messages sent by teachers, they pick up on the invalidation expressed by the teacher and never gain a genuine appreciation of these outcomes.

The local health education curriculum (Province of Nova Scotia, 2003a) dictates that by the end of grade 6 students are expected to demonstrate “knowledge of how communities accept and support people of diverse cultures and people with diverse needs” (Key-Stage Curriculum Outcomes, Values and Practices for Healthy Living). In grade 5 students are expected to “identify and celebrate the diversity of cultures represented in the classroom, school and community (Specific Curriculum Outcome C5.1). In order for the teacher to successfully teach these skills they must make an exerted effort to acknowledge and respect the diverse backgrounds of the students in the classroom. If the teacher is unwilling to accept the strengths that diverse backgrounds bring to the learning environment it will be very difficult for the students to reach these outcomes. In grade 6 students are expected to demonstrate their understanding of gender roles by comparing Canadian male/female roles to those of other countries (Specific Curriculum Outcome D4.1). The cross-curricular connection between these outcomes can be made between social studies students who study ways that varying global cultures influence Canadian culture, which is connected to the health outcome demonstrating an appreciation of heritage of cultural groups in the community and province (Specific Curriculum Outcome C5.1). Also, when examining cross-cultural beliefs and practices related to health and healing, students need to be taught that people in other times and other cultures have had different assumptions about health and healing, which are often based around a more holistic and naturalistic approach. Teachers also have to be aware of what they are comfortable teaching and what areas may cause them to feel uncomfortable or unable to discuss with students. Within the grade 5 specific curriculum outcomes for health students are expected to “demonstrate strategies
for managing feelings associated with the physical and emotional changes of puberty”. Included in this outcome is the goal of having students conduct research to find out how other cultures celebrate puberty. If a teacher is not comfortable covering these subjects because of biases towards other cultural traditions or a level of discomfort with the subject matter, the students may not get the full advantage of conducting this research and comparing the results to that of their own experiences.

**Personal and Professional Characteristics and Cultural Competence**

Research surrounding cultural competencies and teachers is a relatively new field of interest with a multitude of approaches emerging. Predicting cultural competence through examination of personal and professional characteristics is still in the beginning stages of research. Currently, there is limited research connecting these teacher characteristics to cultural competence; however, other professions, including social work and nursing, have recently produced a number of studies adding to the body of research regarding cultural competencies and personal and professional characteristics.

Research investigating differences among cultural competencies in teachers has found that teachers have established cultural awareness, but cultural knowledge and cultural skills are not as established (Martines, 2005; Henkin & Steinmetz, 2008). Based on this research, the current study hypothesized there would be a significant difference among teachers’ awareness, knowledge and skills scores.

Research investigating the connection between sex and cultural competency is currently limited, especially in the field of education. However, in a study investigating how sex affects willingness to develop cultural competence Murtha, Bowens-MacCarthy, Morote & Tatum (2006) found that female teachers showed a higher willingness to engage in training in
multiculturalism and indicated more need for multiculturalism within their school climate, than male teachers. Based on this research, the current study hypothesized female teachers would have significantly higher cultural competency scores than male teachers.

Research investigating the connection between degree level and cultural competence has shown support for a connection between degree level and cultural competence. Tulman and Watts (2008) and Schim, Doorenbos, and Borse (2005) have found that higher degree levels are related to higher cultural competency. Based on this research, the current study hypothesized Master’s level teachers would have significantly higher cultural competency scores than Bachelor’s level teachers.

Research investigating the connection between experience and cultural competence has produced mixed results. DeJaeghere and Zhang (2008) did not find that years experience teaching was related to teachers’ perceived competence; however, Teasley, Baffour and Tyson (2005) and Schim et al. (2005) found that school social workers’ and health care providers’ years experience was related to cultural competence. Based on the teacher research, the current study hypothesized veteran teachers would have significantly higher cultural competency scores than novice teachers.

A literature search for research connecting school level and subject area taught to cultural competence produced no studies analyzing these relationships. Based on the premise that the students of secondary teachers are at a developmental level appropriate for direct instruction surrounding the theory behind cultural competence, and the subject areas taught tend to have many opportunities for including direct instruction regarding cultural competence included in the curriculum , the current study hypothesized secondary teachers would have significantly higher cultural competency scores than elementary teachers and arts teachers would have significantly
higher cultural competency scores than sciences teachers.

Research investigating the connection between course work and cultural competence has shown minimal increases in teacher cultural competence (Brinson & Denby, 2008; Burke & Harmon, 2008). Gorham (2001) found that teachers with recent multicultural education were more involved in fighting prejudice at their schools, and noted that as the hours of multicultural instruction teachers received increased, so too did teachers’ feelings of preparedness to work with culturally diverse students. Based on this research, the current study hypothesized teachers who had completed courses with a cultural competence focus would have significantly higher cultural competency scores than teachers who had not completed any such courses.

Research investigating the connection between workshop participation and cultural competence has found that attending workshops is related to cultural competence, and can increase teacher cultural competence (Colombo, 2007). The same result has been shown to be true within the profession of school social workers (Teasley et al., 2005). Based on this research, the current study hypothesized teachers who had participated in workshops with a cultural competence focus would have significantly higher cultural competency scores than teachers who had not participated in any such workshops.

Research investigating the relationships between different cultural competency scores has found that there can be correlations between different subscales of cultural competence. Glockshuber’s (2005) study examined four different subscales of cultural competence: beliefs, knowledge, skills, and total cultural competence. The study found that there were correlations between total cultural competence scores and beliefs competence scores; beliefs competence scores and knowledge competence scores; beliefs competence scores and skills competence scores; and knowledge competence scores and skills competence scores. Based on this research,
the current study hypothesized teachers’ total cultural competence score would be related to a combination of their awareness, knowledge and skills competencies. Each teacher characteristic would be a predictor of total cultural competence.

Rationale and Significance of the Study

In a country with such a culturally diverse population, it is likely that most teachers will be in classrooms with a diverse student population, at some point in their career. The most recent Canadian census found that approximately five million (16% of the total population) Canadians belong to a visible minority group (Statistics Canada, 2006). This number continues to be on the rise. It has increased from 13% in 2001 and 11% in 1996. There has been a 27% increase in Canada's visible minority population between 2001 and 2006 (Statistics Canada, 2006). Canada's visible minority groups are growing at a rate five times faster than the overall population (Statistics Canada, 2006). With such a high likelihood of teaching in a classroom with a diverse student population it is essential that teachers show acceptance and respect for diversity.

The literature review has identified a need for further study in cultural competence in teachers. Assessment is an example of an area that is impacted by teachers’ cultural competencies. When teachers use culturally insensitive assessment tools they run the risk of misidentifying or underestimating students' learning potential. An example of this can be taken from Stockman's (2000) research on unbiased assessment. Children from diverse cultural and linguistic backgrounds may perform poorly on some standardized tests because of variations in their life experiences, socialization practices, and early literacy experiences (as cited in Laing & Kamhi, 2003). Sometimes children who do not demonstrate mastery of a subject on traditional tests are performing poorly because of limited cultural or linguistic understanding. These students are then improperly labeled with a learning disability (Abedi, 2000; Figueroa &
Hernandez, 2002, as cited in Spinelli, 2008). This misidentification leads to a lack of appropriate services to support the child's actual strengths and needs.

As noted by Bell (2005) another area that is impacted by teachers' cultural competencies is the student-teacher relationship. Positive, caring relationships between teachers and students must include culturally competent practices, such as conveying high expectations, and concern for personal and academic needs. These culturally competent relationships encourage students to learn by building the experiences, knowledge and skills they bring to the classroom. Positive teacher-student relationships can help curtail the high dropout rate of African American male students, and educational experiences negatively impacted by disciplinary actions in schools (Stiff-Williams, 2006).

The purpose of this study was to gain an in depth understanding of how teachers in Nova Scotia schools perceive their cultural competence in classroom practices, by analyzing teacher perceptions of their awareness, knowledge and skills. The goal of this research was to investigate the relationships between teacher perceptions of their cultural competence and a variety of teacher characteristics (such as: years teaching, grade level taught, subject area taught, sex, completed courses with cultural competency curriculum) and to determine which of these factors were predictors for teacher’s cultural competence.

Summary

The development of cultural competence over the last twenty years has lead to a number of similar, yet not identical conceptualizations of the term. There has been a progression from simply gaining facts and knowledge about various cultural groups, to the ability to use this information in creating awareness, knowledge and skills (Sue et al., 1992). More recent definitions have added the ability to synthesize these skills into ongoing relationships with
diverse cultures (Sodowsky & Taffe, 1991; Purnell, 2002; Suh, 2004). The principles of cultural competence have also been applied directly to educational systems in an attempt to create schools that respect, include, and engage all students, regardless of their cultural background (Dei; 2000; Kumashiro, 2004). Evidence for the need of cultural competence in teaching practices has been illustrated at both international and provincial levels. Teachers' cultural competence has been linked to issues surrounding assessment (Solano-Flores & Nelson-Barber, 2000; Fair Assessment Practices, 1993; Stockman, 2000) and quality of teacher-student relationships (Bell, 2005; Stiff-Williams, 2006) which indicate more research is needed in this field to better understand how students are affected by cultural competence.
Chapter 2
Method

Participants

One hundred and twenty-six teachers enrolled in Master’s level courses in the Faculty of Education at Mount Saint Vincent University participated in this study. One hundred and twenty teachers were included in the analysis of this study. Two participants were excluded because they were not teachers, and four participants were excluded because they did not complete 10% or more of the questions. Of the remaining participants, 91 were females, 28 were males, and 1 did not indicate sex. The mean number of years of teaching experience was 9.55 (SD = 6.74). The participants’ number of years of teaching experience ranged from three to 30 years. One hundred and seven teachers indicated the level of school they taught. Forty-seven and a half percent of the participants were teaching in elementary schools, 24.2% in middle schools, 17.5% in high schools, and 10.8% did not indicate the level of school. Teachers were asked to indicate the highest degree they had obtained. Seventy-five percent of participants indicated the highest degree obtained was at the Bachelor’s degree level, 24% had Master’s degrees, and 1% indicated their educational background was Other. (See Table 1).

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive statistics for Participants</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of Teaching Experience</td>
<td>118</td>
<td>9.55</td>
<td>6.74</td>
<td>3-30</td>
</tr>
<tr>
<td>Level of Teaching Position</td>
<td>107</td>
<td>Elementary 47.5%</td>
<td>Junior High 24.2%</td>
<td>High School 15.5%</td>
</tr>
<tr>
<td>Degree Obtained</td>
<td>119</td>
<td>Bachelor 75%</td>
<td>Masters 24%</td>
<td>Other 1%</td>
</tr>
<tr>
<td>Sex</td>
<td>119</td>
<td>Female 76.5 %</td>
<td>Male 23.5%</td>
<td></td>
</tr>
</tbody>
</table>

Note. N=120
For the purposes of analysis teachers were divided into a number of groups based on teacher characteristics. The teacher characteristics included in the analysis were: sex (see Table 1), highest degree obtained, years teaching experience, school level, subject areas taught, number of courses taken with a cultural competence focus, and number of professional development workshops with a cultural competence focus completed. The following divisions were used as they seemed to best represent teacher characteristic variability in the sample.

Teachers were divided into two categories of highest degree obtained. The two categories were Bachelor’s degree, and Master’s degree. The categories were divided as follows: category one \((n = 90)\); and category two \((n = 29)\). Teachers were divided into two categories of years teaching experience. The two categories were novice and veteran teachers. For the purposes of this study teachers with nine or less years teaching experience will be referred to as novice teachers, and teachers with ten or more years teaching experience will be referred to as veteran teachers. The categories were divided as follows: category one \((n = 74)\); and category two \((n = 44)\). Teachers were divided into two categories of school level. The two categories were elementary and secondary teachers. The categories were divided as follows: category one \((n = 57)\); and category two \((n = 57)\). Teachers were divided into two categories of subject area. Only secondary teachers were included in this analysis as elementary teachers generally teach a range of subjects to their students. The two categories were arts (which included Social Studies, English, PDR, Family Studies, Media Studies, Businesses, Drama and Art), and sciences (which included general Science, Math, Physics, Biology, Chemistry, and Oceanography) teachers. Teacher who taught both arts and science subjects were included in the arts category as the hypothesis for this analysis suggested that teaching arts subjects would provide more opportunities to implement culturally competent practices, and teachers in both
subject areas would have been exposed to those opportunities. The categories were divided as follows: category one \((n = 36)\); and category two \((n = 11)\). Teachers were divided into two categories of courses completed. The two categories were no courses in cultural competencies, and one or more courses in cultural competencies. The categories were divided as follows: category one \((n = 56)\); and category two \((n = 63)\). Teachers were divided into two categories of workshops completed. The two categories were no workshops in cultural competencies, and one or more workshops in cultural competencies. The categories were divided as follows: category one \((n = 56)\); and category two \((n = 64)\) (see Table 2).

**Table 2**  
*Descriptive statistics for Participants Across Teacher Characteristics*

<table>
<thead>
<tr>
<th></th>
<th>Category 1</th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Female, n=91</td>
<td>Male, n=28</td>
</tr>
<tr>
<td>Highest Degree</td>
<td>Bachelors, n=90</td>
<td>Masters, n=29</td>
</tr>
<tr>
<td>Years Teaching Experience</td>
<td>Novice, n=74</td>
<td>Veteran, n=44</td>
</tr>
<tr>
<td>School Level</td>
<td>Elementary, n=57</td>
<td>Secondary, n=57</td>
</tr>
<tr>
<td>Subject Area</td>
<td>Arts, n=36</td>
<td>Sciences, n=11</td>
</tr>
<tr>
<td>Courses Completed</td>
<td>0, n=56</td>
<td>1+, n=63</td>
</tr>
<tr>
<td>Workshops Completed</td>
<td>0, n=56</td>
<td>1+, n=64</td>
</tr>
</tbody>
</table>

**Surveys**

*Demographic Survey.* The demographics survey was developed for use in this study, with the intent to gather information on the teacher characteristics that were used to analyze cultural competencies. It requested information regarding the participant’s sex, educational background, teaching experiences, position and professional development (see Appendix B). It did not request that a teacher provide any identifying information. The main purpose of this survey was to gather information to categorize teachers based on teacher characteristics.

*Teachers’ Perception of Cultural Competence.* Based on a review of the literature the questions for the survey were developed by the researcher (see Appendix C). The items used in
the self-report, Teachers’ Perceptions of Cultural Competence survey, had been adapted from a number of well-researched instruments that had been used in past research studies. The adapted items had been developed from the following scales: Cultural Diversity Awareness Inventory (CDAI). The CDAI was developed in 1990 by Henry (1995). A Cronbach’s test of internal consistency evidenced an alpha coefficient of .90. A test-retest for reliability has been established at .66. The Validity of the CDAI has been determined through a panel of experts (Brown, 2004). Multiethnic Climate Inventory (MCI). There are a limited number of instruments that have been determined to measure ethnocentrism. The MCI was chosen because it has been written in a way that makes the scale appropriate for individuals irrespective of their race or ethnicity, and is worded to assess prejudice against no single group in particular. A Cronbach’s test of reliability determined an alpha coefficient of .73 (Negy & Winton, 2008). Multicultural Teaching Concerns Survey (MTCS). The MTCS measures the level of concern educators have regarding work with diverse populations. The items are grouped into four themes: familial and group knowledge, strategies and techniques, cross-cultural competence, and school bureaucracy. A calculated reliability coefficient for the MTCS has been determined to be .80 (Simpson, 2003). Teacher Multicultural Attitude Survey (TMAS). The construct validity of the TMAS has been established through convergent correlations with related instruments, as well the criterion validity has been demonstrated with group differences. Internal consistency tests and a test-retest stability assessment have indicated satisfactory levels of score reliability (Ponterotito, 1998).

The items on the Teachers’ Perceptions of Cultural Competence survey asked teachers to rate their perceptions of a particular aspect of their cultural competence. Each one of the items corresponded to an awareness, knowledge or skill related to cultural competence. For each item participants indicated their agreement with the item using a 5-point Likert-scale where 1
indicated the participant strongly disagreed with the statement, and 5 indicated the participant
strongly agreed with the statement.

Procedure

Teachers were given the Teachers’ Perceptions of Cultural Competence survey to
complete which included measures of teacher’s perceptions of their cultural competencies.
Teachers also completed a demographic survey which measured a number of teacher
characteristics including sex, educational background, years of experience, level of school,
subject area taught, and number of both courses and workshops, with a cultural competence
focus, completed.

Permission to conduct this study was obtained from the Ethics Department at Mount Saint
Vincent University. Prior to beginning this study, professors of graduate level education
courses at Mount Saint Vincent University were contacted via email to request permission to
attend one of their classes to invite their students (who were teachers) to participate in this study.
Given that this research was conducted during an intersession there were not as many professors
teaching as at other times; however, there were six professors who agreed to allow the researcher
to attend a class and recruit participants. The researcher made arrangements with each professor
to attend a class, explain the research study to the teachers and invite them to participate.
Teachers who agreed to participate were each given a letter of invitation which included the
informed consent, a copy of the demographic survey and the Teachers’ Perception of Cultural
Competence survey. Participants were given time to complete the surveys while the researcher
was attending the class. All one hundred and twenty-six surveys distributed were returned. This
represents a 100 percent response rate. Six surveys were excluded from the data analysis. Two
participants were not teachers. Four surveys were excluded on the basis that more than 10 percent of the data was missing from the Teachers’ Perception of Cultural Competence survey. Participants who completed 90% or more of the survey were included in the analysis. Any missing data was replaced with a representational group mean for that item.
Chapter 3

Results

This study examined elementary and secondary teachers’ perceptions of their cultural competencies. The demographic information for teachers participating in this study is shown in the tables below. Table 1 reports the demographic information for this sample of teachers. The second table reports the teachers’ demographic information across teacher characteristics. The groups were divided by sex (e.g., group 1 included females, group 2 included males); highest degree obtained (e.g., group 1 had Bachelor’s degrees, group 2 had Master’s degrees), years of experience (e.g., group 1 had nine or less years of experience, group 2 had ten or more years of experience), level of school (e.g., group 1 had elementary teachers, group 2 had secondary teachers), subject area (e.g., group 1 had arts subject teachers, group 2 had sciences subject teachers), cultural competencies courses completed (e.g., group 1 had completed no courses, group 2 had completed one or more courses), and cultural competencies workshops completed (group 1 had completed no workshops, group 2 had completed one or more workshops). These categories are discussed in the previous section.

Question 1: Will there be a significant difference among the types of cultural competencies (Awareness, Knowledge and Skills).

To test whether there were significant differences among teachers’ Awareness, Knowledge, and Skills scores a one-way repeated measures analysis of variance (ANOVA) was conducted (see Table 3). There was a significant difference among the means of the three types of cultural competencies (Awareness, Knowledge and Skills). F(1,119) = 17034.336, p<0.001.
Table 3
Means of Type of Cultural Competencies

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>4.467</td>
<td>0.399</td>
</tr>
<tr>
<td>Knowledge</td>
<td>3.732</td>
<td>0.336</td>
</tr>
<tr>
<td>Skills</td>
<td>3.690</td>
<td>0.449</td>
</tr>
</tbody>
</table>

To examine whether the major variables of Awareness, Knowledge and Skills were related to the teacher characteristic variables collected for this study, a series of multivariate analyses of variance (MANOVA) were performed.

**Question 2: Will there be a significant difference in cultural competencies between female and male teachers?**

A one-way repeated measures MANOVA was conducted to evaluate the effect of sex on the three different types of cultural competence. Table 4 shows the mean cultural competencies score and standard deviations for each cell of the analysis. Female scores tended to be higher than male scores on each type of cultural competency (M_{female} = 4.5018, 3.7657, 3.7386 vs. M_{male} = 4.3827, 3.6429, 3.5430; SD_{female} = 0.38849, 0.33174, 0.45704 vs. SD_{male} = 0.40601, 0.32479, 0.39700; for awareness, knowledge and skills respectively). Results indicated an overall significant main effect of type of cultural competency, F(1, 117) = 308.705, p<0.001; and an overall significant main effect of sex, F(1,117) = 4.295, p<0.05, p=0.04. The cultural competency type X sex interaction did not reach traditional levels of significance, F (1,117) = 0.702, p=0.702.
Table 4
Means and Standard Deviations of the cultural competency type X sex MANOVA

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Awareness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>4.5018</td>
<td>0.38849</td>
<td>91</td>
</tr>
<tr>
<td>Male</td>
<td>4.3827</td>
<td>0.40601</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>4.4738</td>
<td>0.39421</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>3.7657</td>
<td>0.33174</td>
<td>91</td>
</tr>
<tr>
<td>Male</td>
<td>3.6429</td>
<td>0.32479</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>3.7368</td>
<td>0.33289</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>3.7386</td>
<td>0.45704</td>
<td>91</td>
</tr>
<tr>
<td>Male</td>
<td>3.5430</td>
<td>0.39700</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>3.6925</td>
<td>0.44980</td>
<td>119</td>
</tr>
</tbody>
</table>

Question 3: Will there be a significant difference in cultural competencies between Bachelor’s and Master’s degree teachers?

A one-way repeated measures MANOVA was conducted to evaluate the effect of teachers’ degree on the three different types of cultural competence. Table 5 shows the mean cultural competencies score and standard deviations for each cell of the analysis. Master’s scores tended to be higher than Bachelor’s scores on each type of cultural competency ($M_{masters} = 4.5747, 3.7379, 3.8080$ vs. $M_{bachelors} = 4.4302, 3.7292, 3.6493$; $SD_{masters} = 0.39487, 0.29810, 0.44420$ vs. $SD_{bachelors}= 0.39830, 0.35033, 0.44721$; for awareness, knowledge and skills respectively). Results indicated an overall significant main effect of type of cultural competency, $F(1, 117) = 289.222, p<0.001$; and no overall significant main effect of degree type, $F(1,117) = 2.152, p=0.145$. The cultural competency type X degree type interaction did not reach traditional levels of significance, $F(1,117) = 0.024, p=0.876$. 
Table 5
Means and Standard Deviations of the cultural competency type X degree MANOVA

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor</td>
<td>4.4302</td>
<td>0.39830</td>
<td>90</td>
</tr>
<tr>
<td>Master</td>
<td>4.5747</td>
<td>0.39487</td>
<td>29</td>
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<tr>
<td>Total</td>
<td>4.4654</td>
<td>0.40067</td>
<td>119</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor</td>
<td>3.7292</td>
<td>0.35033</td>
<td>90</td>
</tr>
<tr>
<td>Master</td>
<td>3.7379</td>
<td>0.29810</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>3.7313</td>
<td>0.33715</td>
<td>119</td>
</tr>
<tr>
<td>Skills</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor</td>
<td>3.6493</td>
<td>0.44721</td>
<td>90</td>
</tr>
<tr>
<td>Master</td>
<td>3.8080</td>
<td>0.44420</td>
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<tr>
<td>Total</td>
<td>3.6880</td>
<td>0.44983</td>
<td>119</td>
</tr>
</tbody>
</table>

Question 4: Will there be a significant difference in cultural competencies between novice and veteran teachers?

A one-way repeated measures MANOVA was conducted to evaluate the effect of teachers’ experience on the three different types of cultural competence. Table 6 shows the mean cultural competencies score and standard deviations for each cell of the analysis. Novice scores tended to be higher than veteran scores on awareness and knowledge types of cultural competency; however, veteran scores tended to be higher than novice scores on the skill type of cultural competency (\(M_{\text{novice}} = 4.4842, 3.7841, 3.6433\) vs. \(M_{\text{veteran}} = 4.4405, 3.6490, 3.7674\); \(SD_{\text{novice}} = 0.36189, 0.32775, 0.45043\) vs. \(SD_{\text{veteran}} = 0.45784, 0.34261, 0.44826\); for awareness, knowledge and skills respectively). Results indicated an overall significant main effect of type of cultural competency, \(F(1, 116) = 371.800, p<0.001\); and no overall significant main effect of experience, \(F(1,116) = 0.081, p=0.776\). The analysis revealed a significant cultural competency type X experience interaction, \(F(1,116) = 4.568, p<0.05, p=0.035\) (see Figure 1, Appendix D).
Table 6
Means and Standard Deviations of the cultural competency type X experience MANOVA

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Novice</td>
<td>4.4842</td>
<td>0.36189</td>
<td>74</td>
</tr>
<tr>
<td>Veteran</td>
<td>4.4405</td>
<td>0.45784</td>
<td>44</td>
</tr>
<tr>
<td>Total</td>
<td>4.4679</td>
<td>0.39905</td>
<td>118</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Novice</td>
<td>3.7841</td>
<td>0.32775</td>
<td>74</td>
</tr>
<tr>
<td>Veteran</td>
<td>3.6490</td>
<td>0.34261</td>
<td>44</td>
</tr>
<tr>
<td>Total</td>
<td>3.7337</td>
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</tr>
<tr>
<td>Skills</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Novice</td>
<td>3.6433</td>
<td>0.45043</td>
<td>74</td>
</tr>
<tr>
<td>Veteran</td>
<td>3.7674</td>
<td>0.44826</td>
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</tr>
<tr>
<td>Total</td>
<td>3.6896</td>
<td>0.45174</td>
<td>118</td>
</tr>
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</table>

Question 5: Will there be a significant difference in cultural competencies between elementary and secondary teachers?

A one-way repeated measures MANOVA was conducted to evaluate the effect of teachers’ school level on the three different types of cultural competence. Table 7 shows the mean cultural competencies score and standard deviations for each cell of the analysis. Elementary scores tended to be higher than secondary scores on all types of cultural competency; (M_{elementary} = 4.4795, 3.7832, 3.8006 vs. M_{secondary} = 4.4395, 3.6740, 3.5635; SD_{elementary} = 0.39222, 0.33165, 0.43909 vs. SD_{secondary} = 0.40503, 0.34354, 0.43691; for awareness, knowledge and skills respectively). Results indicated an overall significant main effect of type of cultural competency, F(1, 112) = 387.504, p<0.001; an overall significant main effect of school level, F(1,112) = 4.328, p<0.05, p=0.04; as well as a significant cultural competency type X school level interaction, F(1,112) = 6.224, p<0.05, p=0.014 (see Figure 1, Appendix E).
Table 7
Means and Standard Deviations of the cultural competency type X school level MANOVA

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>4.4795</td>
<td>0.39222</td>
<td>57</td>
</tr>
<tr>
<td>Secondary</td>
<td>4.4395</td>
<td>0.41997</td>
<td>57</td>
</tr>
<tr>
<td>Total</td>
<td>4.4595</td>
<td>0.40503</td>
<td>114</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>3.7832</td>
<td>0.33165</td>
<td>57</td>
</tr>
<tr>
<td>Secondary</td>
<td>3.6740</td>
<td>0.34354</td>
<td>57</td>
</tr>
<tr>
<td>Total</td>
<td>3.7286</td>
<td>0.34059</td>
<td>114</td>
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<tr>
<td>Elementary</td>
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<td>0.43909</td>
<td>57</td>
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<tr>
<td>Secondary</td>
<td>3.5635</td>
<td>0.43691</td>
<td>57</td>
</tr>
<tr>
<td>Total</td>
<td>3.6820</td>
<td>0.45203</td>
<td>114</td>
</tr>
</tbody>
</table>

Question 6: Will there be a significant difference in cultural competencies between arts and science teachers?

A one-way repeated measures MANOVA was conducted to evaluate the effect of subject on the three different types of cultural competence. Table 8 shows the mean cultural competencies score and standard deviations for each cell of the analysis. Arts scores tended to be higher than sciences scores on all types of cultural competency; (M_{arts} = 4.4366, 3.6322, 3.5648 vs. M_{sciences} = 4.2121, 3.5191, 3.2538; SD_{arts} = 0.41296, 0.30454, 0.41325 vs. SD_{sciences} = 0.43010, 0.30971, 0.41418; for awareness, knowledge and skills respectively). Results indicated an overall significant main effect of type of cultural competency, F(1, 45) = 149.212, p<0.001; the main effect of subject did not reach traditional levels of significance, F(1,45) = 3.990, p=0.052. The cultural competency type X subject interaction did not reach traditional levels of significance, F(1,45) = 0.334, p=0.566. An independent samples t-test revealed significant differences between arts and sciences teachers’ overall cultural competence scores, t(45)=2.049, p<0.05, p=0.046.
Table 8

Means and Standard Deviations of the cultural competency type X subject MANOVA

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
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<td>Awareness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts</td>
<td>4.4366</td>
<td>0.41296</td>
<td>36</td>
</tr>
<tr>
<td>Sciences</td>
<td>4.2121</td>
<td>0.46002</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>4.3840</td>
<td>0.43010</td>
<td>47</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts</td>
<td>3.6322</td>
<td>0.30454</td>
<td>36</td>
</tr>
<tr>
<td>Sciences</td>
<td>3.5191</td>
<td>0.32532</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>3.6057</td>
<td>0.30971</td>
<td>47</td>
</tr>
<tr>
<td>Skills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts</td>
<td>3.5648</td>
<td>0.41325</td>
<td>36</td>
</tr>
<tr>
<td>Sciences</td>
<td>3.2538</td>
<td>0.33148</td>
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<tr>
<td>Total</td>
<td>3.4920</td>
<td>0.41418</td>
<td>47</td>
</tr>
</tbody>
</table>

Question 7: Will there be a significant difference in cultural competencies between teachers who had not taken any courses with a cultural competency focus and teachers who had taken a course with a cultural competency focus?

A one-way repeated measures MANOVA was conducted to evaluate the effect of courses on the three different types of cultural competence. Table 9 shows the mean cultural competencies score and standard deviations for each cell of the analysis. At least one course scores tended to be higher than no course scores on all types of cultural competency; \( M_{1+\text{course}} = 4.5344, 3.7723, 3.7449 \) vs. \( M_{0\text{course}} = 4.3967, 3.6951, 3.6359 \); \( SD_{1+\text{course}} = 0.35057, 0.32537, 0.46527 \) vs. \( SD_{0\text{course}} = 0.44130, 0.34227, 0.42672 \); for awareness, knowledge and skills respectively). Results indicated an overall significant main effect of type of cultural competency, \( F(1, 117) = 392.825, p<0.001 \); the main effect of courses did not reach traditional levels of significance, \( F(1,45) = 3.193, p=0.077 \). The cultural competency type X courses interaction did not reach traditional levels of significance, \( F(1,117) = 0.134, p=0.715 \).
### Table 9

**Means and Standard Deviations of the cultural competency type X courses MANOVA**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
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</tr>
</thead>
<tbody>
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<td><strong>Awareness</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>No Courses</td>
<td>4.3967</td>
<td>0.44130</td>
<td>56</td>
</tr>
<tr>
<td>At least 1 Course</td>
<td>4.5344</td>
<td>0.35057</td>
<td>63</td>
</tr>
<tr>
<td>Total</td>
<td>4.4696</td>
<td>0.40013</td>
<td>119</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Courses</td>
<td>3.6951</td>
<td>0.34227</td>
<td>56</td>
</tr>
<tr>
<td>At least 1 Course</td>
<td>3.7723</td>
<td>0.32537</td>
<td>63</td>
</tr>
<tr>
<td>Total</td>
<td>3.7360</td>
<td>0.33425</td>
<td>119</td>
</tr>
<tr>
<td><strong>Skills</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>No Courses</td>
<td>3.6359</td>
<td>0.42672</td>
<td>56</td>
</tr>
<tr>
<td>At least 1 Course</td>
<td>3.7449</td>
<td>0.46527</td>
<td>63</td>
</tr>
<tr>
<td>Total</td>
<td>3.6936</td>
<td>0.44900</td>
<td>119</td>
</tr>
</tbody>
</table>

**Question 8**: Will there be a significant difference in cultural competencies between teachers who had not taken any workshops with a cultural competency focus and teachers who had taken a workshop with a cultural competency focus?

A one-way repeated measures MANOVA was conducted to evaluate the effect of workshops on the three different types of cultural competence. Table 10 shows the mean cultural competencies score and standard deviations for each cell of the analysis. At least one workshop scores tended to be higher than no workshop scores on all types of cultural competency; (M₁+workshop = 4.5763, 3.7738, 3.8163 vs. M₀workshops = 4.3423, 3.6840, 3.5461; SD₁+workshop = 0.35241, 0.34508, 0.44707 vs. SD₀workshops = 0.41611, 0.32121, 0.40847; for awareness, knowledge and skills respectively). Results indicated an overall significant main effect of type of cultural competency, $F(1, 118) = 402.176, p<0.001$; and an overall significant main effect of workshops, $F(1,118) = 11.521, p=0.001$. The cultural competency type X workshop interaction did not reach traditional levels of significance, $F(1,118) = 0.217, p=0.642$. 
Table 10

Means and Standard Deviations of the cultural competency type X workshops MANOVA

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Awareness</strong></td>
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<td></td>
</tr>
<tr>
<td>No Workshop</td>
<td>4.3423</td>
<td>0.41611</td>
<td>56</td>
</tr>
<tr>
<td>At least 1 Workshop</td>
<td>4.5763</td>
<td>0.35241</td>
<td>64</td>
</tr>
<tr>
<td>Total</td>
<td>4.4671</td>
<td>0.39941</td>
<td>120</td>
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<tr>
<td><strong>Knowledge</strong></td>
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</tr>
<tr>
<td>No Workshop</td>
<td>3.6840</td>
<td>0.32121</td>
<td>56</td>
</tr>
<tr>
<td>At least 1 Workshop</td>
<td>3.7738</td>
<td>0.34508</td>
<td>34</td>
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<tr>
<td>Total</td>
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<td>0.33579</td>
<td>120</td>
</tr>
<tr>
<td><strong>Skills</strong></td>
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<td></td>
</tr>
<tr>
<td>No Workshop</td>
<td>3.5461</td>
<td>0.40847</td>
<td>56</td>
</tr>
<tr>
<td>At least 1 Workshop</td>
<td>3.8163</td>
<td>0.44707</td>
<td>64</td>
</tr>
<tr>
<td>Total</td>
<td>3.6902</td>
<td>0.44862</td>
<td>120</td>
</tr>
</tbody>
</table>

**Question 9: Do teachers with particular characteristics perceive themselves to have higher total cultural competency and/or higher skills competency scores?**

To test whether certain teacher characteristics were related to total cultural competency scores and skills scores, correlations were completed (see Table 11). In addition to looking at the correlation between teacher characteristics and total cultural competency scores, the researcher also looked at the correlation between teacher characteristics and skills competency scores. This further investigation into predicting skills competency was done in order to better understand the factors that may be related to how teachers implement the practice of cultural competencies in their classrooms. The correlation between total cultural competency scores, and school level ($r=-0.234, p=0.012$) and workshops ($r=0.281, p=0.002$) were significant. There were no significant relationships between total cultural competency scores and degree ($r=0.121, p=0.191$), experience ($r=0.000, p=0.997$), and courses ($r=0.145, p=0.115$). The correlation between skills competency scores, and school level ($r=-0.263, p=0.005$) and workshops ($r=0.305, p=0.001$)
were significant. There were no significant relationships between skills competency scores and degree (r=0.152, p=0.099), experience (r=0.133, p=0.150), and courses (r=0.122, p=0.187). Thus, the school level and workshops factors are the best predictors of both total cultural competency scores and skills competency scores.

In addition to teacher characteristics, the analysis of the correlation also looked at the relationship between teachers’ total cultural competence score and their awareness competency, knowledge competency and skills competency scores. The analysis revealed several significant correlations among these factors. The correlation between total cultural competency scores and awareness competency (r=0.691, p=0.001), knowledge competency (r=0.842, p=0.001), and skills competency (r=0.924, p=0.001) were all significant. The analysis also revealed that the three factors contributing to the total cultural competency score (awareness, knowledge and skills) were significantly correlated among themselves: between awareness and knowledge (r=0.603, p=0.001), between awareness and skills(r=0.508, p=0.001), and between knowledge and skills (r=0.592, p=0.001).

Table 11
Correlation Coefficients among Teacher Characteristics

<table>
<thead>
<tr>
<th></th>
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<td>0.026</td>
<td>0.287**</td>
<td>0.173</td>
<td>0.148</td>
<td>0.121</td>
<td>0.156</td>
<td>0.011</td>
<td>0.152</td>
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<td>-0.053</td>
<td>-0.009</td>
<td>-0.234*</td>
<td>-0.050</td>
<td>-0.161</td>
<td>-0.263**</td>
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</tr>
<tr>
<td>3</td>
<td>1.00</td>
<td>0.110</td>
<td>-0.206*</td>
<td>0.000</td>
<td></td>
<td>-0.194*</td>
<td></td>
<td>0.133</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1.00</td>
<td>0.460**</td>
<td>0.281**</td>
<td>0.294**</td>
<td>0.134</td>
<td></td>
<td></td>
<td>0.302**</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1.00</td>
<td>0.145</td>
<td>0.172</td>
<td>0.116</td>
<td></td>
<td></td>
<td></td>
<td>0.122</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1.00</td>
<td></td>
<td>0.691**</td>
<td>0.842**</td>
<td>0.924**</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>1.00</td>
<td></td>
<td>0.603**</td>
<td>0.508**</td>
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<tr>
<td>8</td>
<td>1.00</td>
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<td>0.592**</td>
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<td></td>
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<td>1.00</td>
</tr>
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</table>

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
The results of the regression analysis (see Table 12) indicated that sex, experience and school level predicted 8.9% of the variance in teacher’s perceptions of their total cultural competence, and reached conventional levels of statistical significance \( (F (3, 107) = 3.468, p = 0.019) \). Workshop attendance accounted for an additional 6% of the variance in teacher’s perceptions of their total cultural competence \( (R^2 = 0.148, F (1, 106) = 7.414, p < 0.008) \), beyond that accounted for by sex, experience and school level. It should be noted that sex was not included in the correlation analysis due to the highly unequal number of male and female participants, which makes it difficult to make conclusions on the basis of sex. However, sex was included in the regression analysis as a control variable to take any variance due to sex out of the equation.

**Table 12**
*Summary of Hierarchical Regression Analysis for Variables Predicting Teacher’s Perceptions of Total Cultural Competence (N = 120)*

<table>
<thead>
<tr>
<th>Step</th>
<th>Variables</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>ΔR²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Sex</td>
<td>-0.106</td>
<td>0.076</td>
<td>-0.129</td>
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</tr>
<tr>
<td></td>
<td>Experience</td>
<td>-0.004</td>
<td>0.005</td>
<td>-0.077</td>
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<tr>
<td></td>
<td>School Level</td>
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<td>0.064</td>
<td>-0.219</td>
<td>0.089</td>
</tr>
<tr>
<td>Step 2</td>
<td>Workshops</td>
<td>0.173</td>
<td>0.063</td>
<td>0.247</td>
<td>0.060</td>
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</tbody>
</table>

The results of the regression analysis (see Table 13) indicated that sex, experience and workshop attendance predicted 10.3% of the variance in teacher’s perceptions of their total cultural competence, and reached conventional levels of statistical significance \( (F (3, 107) = 4.106, p = 0.008) \). School level accounted for an additional 4.5% of the variance in teacher’s
perceptions of their total cultural competence ($R^2 = 0.148$, $F (1, 106) = 5.595$, $p < 0.020$), beyond that accounted for by sex, experience and school level.

Table 13
Summary of Hierarchical Regression Analysis for Variables Predicting Teacher’s Perceptions of Total Cultural Competence ($N = 120$)

<table>
<thead>
<tr>
<th>Step Variables</th>
<th>$B$</th>
<th>$SE B$</th>
<th>$\beta$</th>
<th>$\Delta R^2$</th>
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<td>Step 1</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>-0.106</td>
<td>0.076</td>
<td>-0.129</td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>-0.004</td>
<td>0.005</td>
<td>-0.077</td>
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<tr>
<td>Workshops</td>
<td>0.173</td>
<td>0.063</td>
<td>0.247</td>
<td>0.103</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Level</td>
<td>-0.152</td>
<td>0.064</td>
<td>-0.219</td>
<td>0.045</td>
</tr>
</tbody>
</table>

The results of the regression analysis (see Table 14) indicated that sex, experience, school level, and workshop attendance predicted 17.3% of the variance in teacher’s perceptions of their skills cultural competence, and reached conventional levels of statistical significance ($F (4, 106) = 5.535$, $p = 0.001$).

Table 14
Summary of Hierarchical Regression Analysis for Variables Predicting Teacher’s Perceptions of Skills Cultural Competence ($N = 120$)

<table>
<thead>
<tr>
<th>Step Variables</th>
<th>$B$</th>
<th>$SE B$</th>
<th>$\beta$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>-0.125</td>
<td>0.098</td>
<td>-0.117</td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>0.005</td>
<td>0.006</td>
<td>0.071</td>
<td></td>
</tr>
<tr>
<td>Workshops</td>
<td>0.244</td>
<td>0.082</td>
<td>0.267</td>
<td></td>
</tr>
<tr>
<td>School Level</td>
<td>-0.210</td>
<td>0.083</td>
<td>-0.230</td>
<td>0.173</td>
</tr>
</tbody>
</table>
Chapter 4
Discussion

The results of this study have given some insight to how particular teacher characteristics are related to cultural competence. The results of this analysis support the hypothesis which stated that there would be a significant difference among teachers’ awareness, knowledge and skills scores. Other studies have found that teachers were able to demonstrate cultural awareness and were aware of strategies for culturally competent classroom practices; however they were less able to demonstrate cultural knowledge or skills, and were unable to justify or elaborate on how they would implement those strategies (Martines, 2005; Henkin & Steinmetz, 2008). Perhaps higher level cultural competence is impaired by teacher schedules, lack of implementation skills training, lack of administrative support, or lack of motivation to implement the skills, or some teachers may be more likely to have particular cultural competency strengths and needs than others based on a number of professional and personal characteristics (Martines, 2005). This study attempted to determine some of the teacher characteristics that are related to teachers’ cultural competence.

The results of this analysis supported the hypothesis, which stated that female teachers would have significantly higher perceived cultural competency scores than male teachers. Similarly, female teachers have been known to show a higher willingness to engage in training in multiculturalism and indicate more need for multiculturalism within their school climate, than male teachers (Murtha, Bowens-MacCarthy, Morote & Tatum; 2006). These findings were similar to the current study’s finding that female teachers perceived themselves to have greater cultural competencies compared to male teachers’ self-perceptions.
The results of this analysis did not support the hypothesis, which stated that Master’s level teachers would have significantly higher cultural competency scores than Bachelor’s level teachers. This result differs from research that has found level of educational attainment in nurses was significantly related to cultural competence (Tulman & Watts, 2008; Schim et al., 2005; Cooper Brathwaite, 2006). This could be due to differences in training undertaken at various levels of educational attainment (i.e., Bachelor’s versus Master’s degrees) between the professions of nursing and teaching. Although both teaching and nursing education programs focus on service delivery that promotes healthy development, it is reasonable to believe that there are large differences in the content and application in which cultural theories are applied among these programs.

The results of this analysis did not support the hypothesis, which stated that veteran teachers would have significantly higher cultural competency scores than novice teachers. There was a main effect of cultural competence type, and no main effect of experience. However, an interesting finding emerged from this analysis; there was a significant interaction between experience and type of cultural competence. Novice and veteran teachers did not have statistically different scores on any of the three types of cultural competencies (awareness, knowledge and skills), and there were significant differences for both novice and veteran teachers among the three types of cultural competence; however, veteran teachers had significantly higher skills competency scores than knowledge competency scores. A possible explanation for this trade off between experience level and skills competency could be gathered from the changing nature of teacher education programs. Novice teachers would have gone through recent teacher education training programs which are currently more focussed on including cultural competency training and curriculum than they have in the past (Banks, 2006).
The research suggests that these teachers would have been exposed to theory and facts regarding cultural competencies, but not had many years of experience to practice implementing such knowledge into their practice. Veteran teachers would have gone through past teacher education programs which may not have had as much focus on cultural competencies as current teacher education programs. These teachers have had many years of experience to learn strategies that are effective in the classroom. The researcher proposes that these teachers may not have the background or theoretical knowledge of why particular techniques prove to be successful in a culturally diverse classroom, but over the years, and through reflection on practice, they have realized that they lead to success, so they continue to implement these culturally competent skills. Research in this area has produced mixed results. Some studies have found that cultural competence is not significantly associated with years experience (DeJaeghere & Zhang, 2008; Schim, Doorenbos and Borse, 2005), while others have found that years experience is related to culturally competent practice. Studies linking experience and cultural competence have produced mixed evidence suggesting that both novice and veteran experience is associated with higher cultural competence (Teasley, Baffour and Tyson, 2005; Cooper Brathwaite, 2006).

The results of this analysis did not support the hypothesis, which stated that secondary teachers would have significantly higher cultural competency scores than elementary teachers. Interestingly, support for the opposite was found, and elementary teachers had significantly higher cultural competency scores than secondary teachers. The results of this analysis revealed a cultural competency X level interaction, indicating elementary teachers had significantly higher skills competency scores than secondary teachers. These results seem plausible when we consider that elementary teachers typically teach for the whole child, whereas secondary teachers typically teach with a more narrowly defined discipline area in mind (Noddings, 2005). A
potential explanation for this finding could be due to the amount of time that elementary teachers spend with their students. Although there are no studies comparing coursework between elementary and secondary teachers in Nova Scotia, it is known that elementary and secondary teachers take similar courses through their teacher education training. This means they would be exposed to similar theories and information regarding cultural diversity, which may be a factor that leads to their similar scores in awareness and knowledge scores. However, elementary teachers typically interact with the same group of students for the whole school day over the course of the school year. This could afford elementary teachers the opportunity to efficiently and effectively learn about their students’ cultural backgrounds and needs. Elementary teachers would also have more time with the same students to implement culturally competent practices in their classroom.

The results of this analysis gave limited support for the hypothesis, which stated that arts teachers would have significantly higher cultural competency scores than sciences teachers. The results of the cultural competency type X subject MANOVA analysis found a main effect of cultural competency type. The results for a main effect of subject only approached traditional levels of significance and should be repeated in the future with large, evenly sized groups of arts and sciences teachers. An independent measures T-test showed that arts teachers had significantly higher total cultural competency scores than science teachers ($t(45)=2.049, p<0.05$). This may indicate that although there are no significant differences between arts and science teachers’ perceived awareness, knowledge, and skills competencies, the aggregate effect of those differences becomes significant. Although this result suggests that teachers may benefit from tailoring cultural competence training to subject area, a literature search produced no studies analyzing the differences in cultural competencies between subject areas.
The results of this analysis did not support the hypothesis, which stated that teachers who completed courses with a cultural competence focus would have significantly higher cultural competency scores than teachers who had not completed any such courses. It has been suggested that “the generally accepted method for instilling cultural competence in practitioners is coursework,” (Brinson and Denby, 2008); however, this study has found that course work may not necessarily be the best method for increasing teachers’ cultural competence. Other professions have found similar results, with no significant difference between social workers’ scores before taking a cultural competence course and after taking a course (Hall, Theriot and Leach, 2008). These results suggest that the inclusion of one or two courses focussed on cultural competency within teacher education programs will only result in minimal increases in culturally competent practices in the classroom (Larke, 1990; Milner, 2003; Wiggins & Follo, 1999 as cited in Burke & Harmon, 2008).

The results of this analysis supported the hypothesis, which stated that teachers who participated in workshops with a cultural competence focus would have significantly higher cultural competency scores than teachers who had not participated in any such workshops. This result is consistent with other research findings that prior professional development workshop experience is associated with cultural competence (DeJaeghere and Zhang, 2008; Schim, Doorenbos and Borse, 2005; Teasley, 2005; Colombo, 2007). Teachers’ responses indicated that professional development workshops were a greater factor in determining cultural competence than courses with a cultural competency focus. It is possible that teachers may get more cultural competence growth from professional development workshops after they have already completed their formal teacher education training courses or because school boards are able to design professional development workshops which are directly relevant to specific student populations.
(Teasley, 2005). The researcher also proposes that cultural competency workshops are deliberate in their setting and provide a more contextualized application for teachers. In many cases teachers have made the conscious choice to attend a professional development workshop, whereas most courses are required and teachers have no choice in attending. This may mean that when teachers take an active role in initiating participation they are more likely to benefit from attendance than if they were mandated to go to a course covering similar material. It is also likely that professional development workshops are substantially different from course work in areas other than the material covered. In professional development workshops learning tends to take place through networking and collaborative grouping similar to professional learning community models (Dufour, 2004). These sessions are often focused on application to practice, whereas courses often do not provide opportunities to do practical applications other than reflection. When teachers have built shared knowledge and vow to collaborate as a team, positive changes are possible within the school as groups of teachers begin to discuss and identify characteristics and practices that are most helpful in ensuring success for all students (Dufour, 2004).

The results of the correlation analysis partially support the hypothesis, which stated that teachers’ total cultural competence score is related to a combination of their awareness, knowledge and skills competencies and each teacher characteristic examined would be a predictor of total cultural competence. This study provided evidence to support the relationship between teachers’ total cultural competence score and the awareness, knowledge and skills competence scores. Significant relationships between total cultural competence scores and beliefs competence scores; beliefs competence scores and knowledge competence scores; beliefs competence scores and skills competence scores; and knowledge competence scores and skills competence scores have been found in previous research (Glockshuber, 2005). Only teacher
characteristics of school level and workshop participation were predictors of total cultural competence. These results may provide evidence to suggest that the factors of teacher characteristics do not correlate to total cultural competence at the same level. The predictive factors of teacher characteristics may correlate with total cultural competence in complex alternative processes operating within a multidimensional model (Glockshuber, 2005).

**Implications and Directions for Future Research**

In order to better understand and respond to the needs and challenges of teachers working with diverse students, this study explored the relationships between teacher characteristics and cultural competencies. This study identified significant differences in sex, level, and workshop attendance; however, there could be a number of other factors that are connected to teachers’ cultural competence. Additionally, there should be further investigation into other teacher characteristics that could be related to, or predictors of, teachers’ perceived cultural competence. It should be noted that this information is important not only for teachers, but for all professionals that work with students (i.e., school psychologists, speech-language pathologists, behaviour specialists, etc.). One factor that appears to be resulting in mixed findings among research in different fields is that of experience. Future research could examine different subscales of cultural competence in teachers to see if years experience as a teacher becomes a predictor of specific competences. One of the findings from this study showed that attending workshops, rather than courses, was a better predictor of teachers’ cultural competence, and that attending professional development workshops resulted in increased cultural competence, where as completion of courses did not. Future research should examine the differences between workshops and courses to determine why workshops appear to be more
successful in increasing teachers’ perceived cultural competencies. Research in this field will allow educational facilities to develop courses in a way that benefits teachers by drawing from the successful components of workshops. It is possible that workshops are tailored to more specific needs than a general academic course, and may also include more opportunity to practice implementing skills through role play and discussion of classroom examples. This study found that veteran teachers had higher perceptions of their culturally competent skills than novice teachers. This result, coupled with the distinction between courses and workshops, may indicate a theory-practice gap, in which teachers are learning theories related to cultural competence but are unable to translate that knowledge into practice. Future research should look closely at the gap between course work (including that taught in teacher preparation programs and continuing education courses), theory and practice.

This study found that elementary teachers had significantly higher skills competency scores than secondary teachers. The researcher hypothesises that this result could be related to the amount of time that elementary teachers spend interacting with the students, and getting to know them on a more intimate and personal level. Elementary teachers may also have more contact with students’ homes and therefore know more about the students’ backgrounds and how to incorporate appropriate culturally competent skills into their daily interactions with the students. This speculation should be investigated in a larger scale study and in detail through teacher interviews and classroom observations in order to better understand the reasons behind elementary teachers’ skills competency. Future research should also attempt to determine how secondary teachers can use techniques of teaching the whole child in their area of discipline in ways similar to elementary teachers.

This study has implications for current and future education students. It is important for
teachers to be aware of their cultural competencies; however, it is unclear whether teachers are prepared by their education programs to understand and implement culturally competent practices into their classroom teaching. As well, they may not have the experience to realize the different types of cultural competencies required by teachers, as was seen with the novice and veteran teachers. Kea, Trent, & Davis (2002) suggest that teachers need professional development opportunities to learn how to implement culturally competent strategies and practices into their instructional methods. These professional development opportunities are important for the integration of cultural awareness and knowledge into practice. Studies like this may allow education students to be better prepared when entering the teaching profession. Also, these studies provide administrators with information on teachers’ cultural competencies and allow directors of professional development to tailor workshops to meet the needs of teachers.

In order to see that Dei’s (2000) conceptualization of inclusive schools as places that demonstrate cultural competence through necessary awareness, knowledge and skills is realized, teacher education programs and teacher professional development workshops need to focus on preparing teachers for the challenge of using their awareness and knowledge in ways that lead to instructional opportunities that include, respect and educate all students, through practices that are congruent with that particular child’s cultural background.

Limitations

While this study provides information on teachers enrolled in graduate courses at an Eastern Canadian university there are a number of limitations. The first limitation involves the small sample size for this study. Six of the thirteen professors contacted in the Faculty of Education agreed to have the researcher attend a class and distribute surveys to teachers wishing to participate. The possible sample size was reduced to less than half of the teachers enrolled in
graduate courses. The actual sample size was one hundred and twenty teachers. Future research should draw participants from a larger geographical area and include a more comprehensive sample that goes beyond teachers enrolled in graduate programs to deepen our understanding of teachers’ perceptions of cultural competencies. The current study targeted a specific group of teachers which may make it difficult to generalize the results to teachers outside of graduate programs. Future research should include more male teachers as the modest number of male participants in this study limited the sex comparison analysis that could be conducted (female teachers, n=91; male teachers, n=28; did not indicate, n=1).

For the purposes of this study teachers were asked to indicate the number of workshops that they had attended with a cultural competency focus; however, this study did not ask specific questions about the workshops that the teachers attended. Therefore the researcher was unable to analyze whether there was a difference between the different forms of workshops. Some teachers may have attended a series of workshop sessions over a number of meetings where they were given opportunities to practice hands on skills, while others may have attended an independent half-day workshop listening to lectures. Future research could use more advanced sub-categories to focus on the particular type and duration of cultural competency workshops that lead to improved scores in teachers.

Finally, as with all self-report studies, the results are limited by the participants’ responses. Nonetheless, it is important to have the individuals’ evaluation of their perceptions of their cultural competencies, as this gives teachers a voice and allows some insight into teachers’ viewpoints. It is important to note that the participants may feel they have to provide the answer the researcher is looking for rather than what they believe to be true. As well, the survey tool developed for use in this study was adapted from a number of surveys used in previous research
studies, all of which had yielded high reliability and validity; however, the new survey used should be rigorously tested in the future to examine its own reliability and validity properties.
References


Lohr, S. Sampling: Design and Analysis, Duxbury Press, 1999


Statistics Canada, Canada’s Ethnocultural Mosaic, 2006 Census: Highlights [online, cited January 28, 2009].


The Principals for Fair Student Assessment Practices for Education in Canada (1993)


Appendix A

Letter of Invitation and Consent

Teacher's perceptions of their cultural competencies / Lindsay Leighton

I am a graduate student in the Faculty of Education at Mount Saint Vincent University. As part of my master's in school psychology, I am conducting research under the supervision of Dr. Mary Jane Harkins and committee member Marlene Ruck Simmonds. I am inviting you to participate in my study, Teacher's perceptions of their cultural competencies. The purpose of the study is to gain an in-depth understanding of how teachers perceive cultural competencies in their teaching practices.

This study involves the completion of basic demographic information and a survey measuring your perceptions of your cultural competencies. It should take you approximately 10 minutes to complete the survey. I will explain the rationale and significance of my research and then answer any questions you may have. I will then distribute surveys to those who wish to participate. After completion of this research, a copy of the study will be made available to you upon request, and a copy of the completed thesis will be available at the University Library and/or Curriculum Resources Center of the Faculty of Education, Mount Saint Vincent University. The results of this study will be used for future presentations at conferences and submission to peer reviewed journals for publication.

This study of teacher perceptions will make an important contribution to the research on teachers' use of multicultural competencies in Nova Scotia. No potential risks are foreseen from participation in this study. Your participation is completely voluntary. You may refrain from answering any question, if you so choose and you may withdraw from this study at any time without penalty. You need to be aware that if you reveal information causing the researcher to feel that anyone is the subject of abuse or neglect or is engaged in illegal activities, the researcher will have the responsibility to report this information to the proper authorities. This study is not related in any way to your coursework.

Collected information will be anonymous and confidential. During data collection no identifying information will be collected. Once the study has been completed and analyzed, the researcher will shred all hardcopies of the survey. By reading this letter of information and consent, and submitting the survey, you will be agreeing to participate. The act of submitting the survey acts as your signed consent.

If you have any questions about this study, please contact Lindsay Leighton, or Dr. Mary Jane Harkins, 457-6595, maryjane.harkins@msvu.ca. This research activity has met the ethical standards of the University Research Ethics Board at Mount Saint Vincent University. If you have questions about how this study is being conducted
and wish to speak with someone who is not directly involved in the study, you may contact the Chair of the University Research Ethics Board (UREB) c/o MSVU Research and International Office, at 457-6350 or via e-mail at research@msvu.ca.

Thank you for your time.
Sincerely,

Lindsay Leighton, B.Ed
School Psychology Student

By submitting the attached survey, you are indicating that you fully understand the above information and agree to participate in this study.
Appendix B

Demographic Information Form

Sex:

☐ Female
☐ Male

Undergraduate Major:
__________________________________

The highest educational degree I have been awarded is:

☐ Some College  ☐ Master’s Degree
☐ Bachelor’s Degree  ☐ Doctorate Degree
☐ Teacher's Diploma  ☐ Other ________________

Please indicate the level at which you currently teach:

☐ Elementary
☐ Junior High
☐ Senior High

Please indicate what grade and subject area (for junior and senior high) you currently teach:

Grade(s): __________________________
Subject(s): __________________________

How many years have you been teaching: ________________
How long have you been in your current position: ________________

Please specify the number of courses focusing on cultural competency you have completed:

☐ 0
☐ 1
☐ 2+

Please specify the number of workshops or professional development sessions focusing on cultural competency you have completed:

☐ 0
☐ 1
☐ 2+
Appendix C

Teachers’ Perceptions of Cultural Competence Survey

Please rate the following items regarding your perceptions of your own cultural competence using the following scale:

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

I believe I have the responsibility to be aware of my students’ cultural backgrounds
1 2 3 4 5

I believe English should be taught as a second language to my non-English speaking students as a regular part of the school curriculum
1 2 3 4 5

I believe I would prefer to work with students and parents whose cultures, values or beliefs are similar to my own
1 2 3 4 5

I believe it is not my responsibility to encourage pride in one’s culture
1 2 3 4 5

I believe I would be uncomfortable in settings with people who speak non-standard English
1 2 3 4 5

I believe I provide instructional activities to help my students develop strategies for dealing with racial confrontations
1 2 3 4 5

I believe I am sometimes surprised when members of certain ethnic groups contribute to particular school activities (e.g. bilingual students on the debate team or Black students in the orchestra)
1 2 3 4 5
I believe I can analyze instructional materials for potential stereotypical and/or prejudicial content

1 2 3 4 5

I believe I can learn a great deal from students with culturally different backgrounds

1 2 3 4 5

I believe meetings about an individual student’s learning needs, from my classroom, should be scheduled at the convenience of the student’s parent(s)

1 2 3 4 5

I believe my students should be referred for testing if learning difficulties appear to be due to cultural differences and/or language

1 2 3 4 5

I believe I invite extended family members to attend parent-teacher conferences

1 2 3 4 5

I believe adaptations in standardized assessments to be questionable since they alter reliability and validity

1 2 3 4 5

I believe I make lessons and content relevant to diverse students

1 2 3 4 5

I believe translating a standardized achievement or intelligence test to my student’s dominant language gives my student an added advantage and does not allow for peer comparison

1 2 3 4 5

I believe I develop activities that increase the self-confidence of diverse students

1 2 3 4 5
I believe regardless of the racial and ethnic makeup of my classroom, it is important for all of my students to be aware of multicultural diversity

1 2 3 4 5

I believe my own beliefs sometimes interfere with the content I am teaching

1 2 3 4 5

I believe my knowledge of a particular culture affects my expectations of the student’s performance

1 2 3 4 5

I believe I adapt my teaching methods to meet the needs of culturally diverse student groups

1 2 3 4 5

I believe there is sometimes too much emphasis placed on multicultural awareness and training for teachers

1 2 3 4 5

I believe I can effectively teach a class of students whose ability and experiential levels are widely diverse

1 2 3 4 5

I believe as my classroom becomes more culturally diverse, my job becomes increasingly challenging

1 2 3 4 5

I believe I get students from diverse groups to work together

1 2 3 4 5

I believe being multiculturally aware is not relevant for my students

1 2 3 4 5

I believe the displays and frequently used materials within my classroom show at least three different ethnic groups or customs

1 2 3 4 5
I believe multicultural training is not necessary for my teaching success

1 2 3 4 5

I believe it is my responsibility to provide opportunities for students to share cultural differences in foods, dress, family life, and/or beliefs

1 2 3 4 5

I believe multicultural awareness training can help me work more effectively with a diverse student population

1 2 3 4 5

I believe I utilize the most effective methods for teaching diverse students

1 2 3 4 5

I believe today’s curriculum gives undue importance to multiculturalism and diversity

1 2 3 4 5

I believe I help my students take on the perspective of ethnic and cultural groups different from their own

1 2 3 4 5

I believe exploring my own beliefs and cultural heritage allows me to recognize personal biases and balance perspectives in my teaching

1 2 3 4 5

I believe other than the required school activities, my interactions with parents include social events, meeting in public places (e.g. shopping centers), or telephone conversations

1 2 3 4 5

I believe what I learn about the languages and cultures of our students and their families, challenges my thinking and enriches my life personally and professionally

1 2 3 4 5
I believe I can be myself when working with culturally diverse students

| 1 | 2 | 3 | 4 | 5 |

I believe my culturally diverse students perceive me as biased simply because my background is different from theirs

| 1 | 2 | 3 | 4 | 5 |

I believe I effectively deal with the attitudes of intolerance toward diverse students as expressed by my colleagues

| 1 | 2 | 3 | 4 | 5 |

I believe diverse students’ home environments are adequate models for academic study

| 1 | 2 | 3 | 4 | 5 |

I believe I can discuss the potential bias of at least two assessment instruments frequently used in schools

| 1 | 2 | 3 | 4 | 5 |

I believe my students should be taught mostly by teachers of their own ethnic and cultural background

| 1 | 2 | 3 | 4 | 5 |

I believe my culture to be different from some of the students in my classroom

| 1 | 2 | 3 | 4 | 5 |

I believe when dealing with bilingual students, I may misinterpret different communication styles as behavior problems

| 1 | 2 | 3 | 4 | 5 |

I believe teaching my students about cultural diversity will only create conflict within my classroom

| 1 | 2 | 3 | 4 | 5 |
I believe I sometimes stereotype students based on their race
1 2 3 4 5

I believe as my classroom becomes more culturally diverse, my job becomes increasingly rewarding
1 2 3 4 5

I believe I help all students relate to those who have different backgrounds in my classroom
1 2 3 4 5

I believe adaptations should be made in programming to accommodate different cultures as enrolment changes
1 2 3 4 5

I believe I am an advocate for fair testing and the appropriate use of testing students from diverse backgrounds
1 2 3 4 5

I believe the views of my students’ family regarding school and society should be included in the school’s yearly program planning
1 2 3 4 5
Appendix D

Figure 1
*Mean awareness, knowledge and skills scores as a function of experience*
Figure 2
Mean awareness, knowledge and skills scores as a function of school level