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## Empathy: Do Levels Vary by Years of Service, Age or Gender?

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EMPATHY: DO LEVELS VARY BY YEARS OF SERVICE, AGE OR GENDER?

By

Josh Jessen

A DISSERTATION

Presented to the Faculty of

The Graduate College of the University of Nebraska

In Partial Fulfillment of Requirements

For the Degree of Doctor of Education

Major: Educational Leadership

Under the Supervision of Dr. Kay Keiser

Omaha, Nebraska

May, 2017

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EMPATHY: DO LEVELS VARY BY YEARS OF SERVICE, AGE OR GENDER?

Josh Jessen, EdD

University of Nebraska, 2017

Advisor: Dr. Kay Keiser

Leadership in education requires empathy. Empathy is the conduit to engaging students and little is known about empathy in adults (Eisenberg & Fabes, 1990; Hoffman, 2000; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992) and even less is known about empathy in teachers. This study seeks to measure objective quotients of empathy among educators for the purposes of recruiting and maintaining highly empathetic teachers who might realize greater learning gains.

This study would not have been possible without the help of the faculty and staff of the University of Nebraska-Omaha College of Education. The inspiration for this dissertation came from working with dozens of faculty and graduate students on grants and research studies in their selfless pursuit to make education better for all children and for their desire to create the best, most prepared teacher and education leaders.

The people who encouraged me to enter the doctoral program and those I leaned on for support deserve to be thanked directly: Dr. Neal Grandgenett, Dr. Kay Keiser, Dr. Peter Smith, Dr. Jeanne Surface, Dr. Elliot Ostler, Dr. Dick Christie, Ms. Marsha Vance, Dean Nancy Edick, Dr. Nick Stergiou, Dr. David Conway, Dr. Paul Barnes, Dr. Abbey Bjornsen, Dr. Susan McWilliams, Dr. William Austin, Dr. Sarah Edwards, Dr. Cindy Copich and Dr. Joleen Johnson.

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## CHAPTER 1

### INTRODUCTION

Empathetic engagement between teacher and student may be the most important tool in bridging barriers that can divide the classroom, the school district and our society. The role that emotions like empathy play in engagement and learning are swiftly finding new validation through new quantitative and qualitative research studies. Engagement between teacher and student may hold greater significance for learning gains than any instructional approach could hope to achieve. Since engagement precedes the transmission of content in instruction, without high engagement by highly empathetic teachers, we know that learning in the classroom will suffer.

In practical terms, teachers must possess and maintain high amounts of empathy if we wish them to engage and educate students, communicate effectively in teams and understand the needs of parents and the community. For teachers, empathy is an absolutely essential skill which deserves attention as a singular topic of professional development to be explored and understood by practitioners in order to maintain and increase their overall effectiveness. To achieve greater levels of engagement and create more equitable education experiences for students, the use of validated interventions (Kane et. al., 2007; Stepien & Bernstein, 2006) for increasing and maintaining empathy must be targeted toward educators and incorporated into district professional development practices.



Little is known about empathy in adults (Eisenberg & Fabes, 1990; Hoffman, 2000; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992) and less is known about teacher empathy. Existing data hints at the erosion of empathy over time among career educators but no studies confirm or refute it. This study seeks to measure teacher empathy at different years of service, age and gender among a large sample of teachers. Knowing this will inform teacher professional development as well as the recruitment and retention of highly empathetic teachers and give educational leaders new insight into the management of teachers for long-term retention and increased educational outcomes.

Training practitioners in empathy is relatively easy and costs very little with the exception of the cost of a facilitator. Considering that numerous studies support effective interventions (Kane et. al., 2007; Stepien & Bernstein, 2006) that serve to increase empathy in the field of medicine, these approaches should be considered for adaptation to the field of Education. Teacher empathy can easily be increased in a school and across a district through relatively short interventions, making engagement become stronger and more effective with possibly greater learning gains realized. The maintenance and development of empathy among teachers should be an essential aspect of any district professional development plan (Ashkanasy & Dasborough, 2003).

Empathy plays a role in all our communications (Davis, 1983, 1994; Ickes, 1997; Singer, 2009) and may be the single most important factor in conveying content to students in the classroom. High amounts of empathy are needed among administrators and teachers if they are to be effective in engaging with, understanding the needs of, and gauging the progress of students. Without high empathy, student learning suffers due to a lack of engagement on the part of the teacher. Different than a lack of empathetic

engagement on the part of the student, a lack of ability to engage students with empathy by a teacher affects the entire classroom and slows learning.

Empathy is both an emotion and an emotional act; it is felt and observed in the actions and reactions of others and it can be increased through proven interventions that could result in increased gains in the classroom. Beyond the classroom, educational leadership – by definition – calls for the ability to empathize and understand multiple perspectives of students, teachers, families and the community with tact and fairness. Should empathy drop or erode among teachers and teacher leaders at a common career-point, it would be very important for leadership at the school and district level to provide the supports teachers need to increase and maintain empathy in their classrooms and leadership roles.

Measuring empathy should be done broadly across a district and never done subjectively for evaluation purposes. Assessing empathy is a relatively simple thing to do using a questionnaire like the one used in this study, however, a given teacher should never be subjected to a test of the amount of empathy they possess as part of any evaluation process or act that would include a possible punitive result.

We should also be aware of the importance of teachers monitoring their own empathetic engagement and help them recognize signs of the erosion of empathy in themselves. Doing so helps practitioners become more receptive to supports that districts provide beyond just professional development like employee assistance programs and district-wide health and self-care promotions. Since we know that loss of empathy is highly correlated to burnout, maintaining empathy holds importance for teachers and

education leaders wanting to prevent burning out. Part of preventing burnout is understanding its causes and being aware of supports a given district might provide to teachers so they can stave off or avoid burnout altogether. Ultimately, burnout comes from long-term stress from a variety of sources (i.e., financial, illness, traumatic) outside of the workplace (Zenasni, Boujut, Woerner & Sultan, 2012) that erode empathy and eventually results in burning out. The cost of teacher recruitment and the toll on morale this takes on schools and districts can't be ignored.

There are few teacher education courses which specifically explore empathy as a singular topic and few existing interventions focused on empathy are being used in the classroom. Instead, empathy is considered an implicit aspect of all learning and engagement with the exception of some education interventions that employ empathy in regard to improving classroom discipline. Additionally, there is an absence of the study of teacher empathy in the literature. This makes the study of empathy in teachers a needed new area for exploration and consideration among teacher educators and teacher leaders.

While we wouldn't terminate teachers whose empathy drops or fluctuates (and it would not seem wise to base hiring practices on one's results from an empathy assessment) we can recognize the need for professional development to increase and maintain empathy based upon its importance in engagement and burnout. And while incentivizing high empathy or using low empathy against a teacher would seem uninformed on the part of a district, screening of teacher candidates for high empathy may help both the prospective teacher candidate and teacher education program to find

candidates who will thrive in a degree area within education that explicitly requires empathetic engagement.

Empathy is both an emotion and emotional act that defines our interaction based upon the amounts of empathy we possess (Davis, 1983, 1994; Ickes, 1997; Singer, 2009). Our empathetic engagement with one another precedes the conveyance of content.

Understanding empathy and its role in teaching and learning is essential for any educational leader to master and just as empathy encompasses numerous areas of communication and engagement, its study in education calls for crossing into many fields; Psychology and Medicine being the fields where empathy has most been studied among practitioners. Since empathy is a little-studied area of education, a study of teacher empathy calls for a broad look at the contributors to the erosion of empathy and what we know about adult empathy as well as the nature of empathy in pursuing a career in education.

The purpose of this study is to measure empathy in public school teachers at given years of service, age and gender and compare those measurements to determine if they vary. Through surveying empathy in two different demographically, socioeconomically and politically-leaning states (Oregon and Nebraska), a general pattern of teacher empathy at given career length should emerge.

Numerous definitions exist for empathy that cover a spectrum of emotions and actions. This study requires a definition of empathy in terms of empathetic engagement in education. The fields of Psychology and Medicine share a transdisciplinary definition of empathy that combines and aligns theory and concepts reaching from Goleman's

Emotional Intelligence and mindfulness (Goelman, 1995) to Robert Hogan's Empathy Scale (1969) for assessing the severity of brain trauma.

The literature review for this study is divided into five general areas, each of which are interrelated to the need for highly empathetic teachers who can effectively engage students in learning and maximize learning gains and it serves to provide an overview of factors that have a role in the need for increasing and maintaining empathy in teachers. The research population consists of 1,000 public school teachers, k-12 and the survey used in the study is the Toronto Empathy Questionnaire (TEQ) (Spreng, McKinnon, Mar & Levine, 2009), originally developed through a collaboration between the National Institutes of Health and the Canadian Institutes of Health Research.

## **Background**

K-12 education requires the recruitment and retention of highly empathetic educational leaders and practitioners (Ashkanasy & Dasborough, 2003). Empathy is both an emotion and act of cognition and is the core of all the communicative events among us (Davis, 1983, 1994; Ickes, 1997; Singer, 2009). Our ability to empathize determines our development and is the driving force behind every communicative act (Eisenberg, 2000; Hoffman, 1977, 2000). Despite knowing how important the ability to empathize is, conceptualizing empathy as an emotional skill is a relatively new idea and has often only been considered a secondary, nebulous quality of communication in education practice until recently in contexts mostly associated with classroom management and discipline (Okonofua, Paunesku & Walton, 2016).

To be clear, empathy is not just caring, it is the ability to feel others' feelings. It builds on sympathy and it is the intellectual or imaginative apprehension of another's condition or state of mind and the vicarious emotional response to the perceived emotional experiences of others (Hashimoto & Shiomi, 2002; Hogan, 1969; Mehrabian & Epstein, 1972).

### **Significance**

We know a great deal about empathy among children and adolescents, but little is known about empathy in adults - and what might be thought of as normal levels of empathy for adults (Eisenberg & Fabes, 1990; Hoffman, 2000; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). However, the study of the importance of empathy among practitioners in the field of medicine has been ongoing for more than 20 years due to the need for highly empathetic doctors and nurses (Pedersen R., 2009) and has called for interventions (Kane et. al., 2007; Stepien & Bernstein, 2006) that seek to ensure its maintenance due to a proven drop in empathy among doctors (Hojat et. al., 2009; Kane, 2007; Kataoka, 2009; Newton, 2008). These existing and effective interventions can and should be applied to the recruitment, retention and development of education leaders and practitioners who can effectively bridge gaps in understanding students from strikingly different social, cultural and ethnic backgrounds during times of increasing inequalities and disparities which create barriers to engagement.

This study will be conducted using a survey containing the TEQ. If significant fluctuations are found similar to those in prior research (Jessen, 2015), successful interventions already shown to be quantitatively and qualitatively effective in

practitioner-based medical education will be recommended for use in the recruitment and development of highly empathetic practitioners in the field of education.

### **Theoretical Framework**

The recognition of the role of empathy in learning and its study is not new in any way. Lev Vygotsky pioneered the study of empathy in learning in 1930 with the publication of his book, *Mind and Society* (1930-1934/1978). He demonstrated the processes involved in what is often thought to be intuitive, learned communication between teacher and student and he defined the process for how a teacher measures capacity for learning in students (i.e. Zone of Proximal Development). This process is at the heart of Vygotsky's cultural historical theory of social learning and is reflected in the background and design of this study by providing a lens from which to view the different dimensions of empathy involved in student engagement, instruction and learning.

Specifically, this study finds its framework for conceptualizing the dynamics of teacher empathy within Vygotsky's *Social Action and Transformation of Physical Activity* and *Change in Perception and Attention* theories. From these two theories, this study draws upon Vygotsky's three stages of learning to establish a lens from which to view empathy as part of a linear interaction where: (1) an operation that initially represents an external activity begins to occur internally, (2) an interpersonal process is transformed into an intrapersonal one, and, (3) The transformation of an interpersonal process into an intrapersonal one is the result of a long series of developmental events (Vygotsky, 1930-1934/1978).

According to his theories of *Social Action and Transformation of Physical Activity* and theory of *Change in Perception and Attention*, learning is represented as an external experience which is then internalized and becomes memory. Vygotsky describes the process of internalization as a series of transformations:

*(a) An operation that initially represents an external activity is reconstructed and begins to occur internally. Of particular importance to the development of higher mental processes is the transformation of sign-using activity, the history and characteristics of which are illustrated by the development of practical intelligence, voluntary attention, and memory.*

*(b) An interpersonal process is transformed into an intrapersonal one. Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological), and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relations between human individuals.*

*(c) The transformation of an interpersonal process into an intrapersonal one is the result of a long series of developmental events. The process being transformed continues to exist and to change as an external form of activity for a long time before definitively turning inward. For many*



*functions, the stage of external signs lasts forever, that is, it is their final stage of development. Other functions develop further and gradually become inner functions. However, they take on the character of inner processes only as a result of a prolonged development. Their transfer inward is linked with changes in the laws governing their activity; they are incorporated into a new system with its own laws (Vygotsky, 1930-1934/1978).*

Each of the four variables used in the study are a measure of empathy and play roles in the process(es) of communication described in Vygotsky's theory. The work cited in the study by Vygotsky comes prior to later research on clinical screening and assessment of empathy in Psychology and Medicine with validated instruments. Therefore, the variables used in the study are not those described by Vygotsky, but are derived from collective measures of empathy over 40 years, beginning with the Hogan Empathy Scale (1969) and ending with the TEQ in 2009. The variables used in this study, which define the range of empathy in emotions and actions, serve as further elaboration into Vygotsky's theories of *Social Action and Transformation of Physical Activity* and *Change in Perception and Attention*.

### **Definitions**

The variables of empathetic engagement described below may fall into one or more of Vygotsky's three-part theory, however, their specific role in Vygotsky's theory is less important than their abstract or concrete "place" in defining the spectrum of empathy measured in the study. The variables in this study are derived from the TEQ and, while

not derived directly from Vygotsky's theory, they fit within the processes outlined by Vygotsky's linear theory at different points in time.

Four variables are measured in the study: (1) an overall measure of all empathy the teacher possesses (*Global Empathy*), (2) a measure of perspective-taking and self-restraint (*Self/Other-Oriented Feelings*), (3) a measure of the healthy performance of dynamic empathetic engagement (*Empathetic Interaction*), and (4) body language (*Behavioral vs Subjective Emotional Change*).

***Global Empathy*** covers all aspects of empathy and serves as a measure of general empathy – an umbrella category for all empathetic feelings and actions and would be involved in all three parts of Vygotsky's theory of *Social Action and Transformation of Physical Activity* and *Change in Perception and Attention*. It is defined as The ability to feel others' positive feelings (Hashimoto & Shiomi, 2002); the intellectual or imaginative apprehension of another's condition or state of mind (Hogan, 1969); a vicarious emotional response to the perceived emotional experiences of others (Mehrabian & Epstein, 1972); and, perceiving the feeling state of another as well as the capacity to do so accurately (Spreng, McKinnon, Mar & Levine, 2009).

***Self/Other Oriented Feelings*** (*Empathic Concern* and *Monitoring of Personal Distress*) is a measure of perspective-taking and self-restraint mostly involved in the first two parts of Vygotsky's three-part theory where an external operation becomes internal and the interpersonal process become intrapersonal. This variable combines *Empathic Concern* and *Monitoring of Personal Distress* due their interdependence in the cycle of transaction described in both. ***Empathic Concern*** (Fantasy, perspective taking, feelings of sympathy and concern for unfortunate others) (Cliffordson, 2002) is interdependent

with *Monitoring of Personal Distress* ("self-oriented" feelings of personal anxiety and unease in tense interpersonal settings) (Davis, 1983). For example, in regard to classroom discipline, teachers engage in Empathic Concern using sympathy and perspective taking to understand student behavior and actions while at the same time restraining their emotions through their own Monitoring of Personal Distress (I.e., the teacher reacts to inappropriate behavior without giving away their frustration while at the same time seeking to understand the source of the misbehavior).

*Empathetic Interaction* (*Vicarious experience* and *Interpersonal Positiveness*) is the healthy performance of dynamic empathetic engagement. It is mostly involved in the first two parts of Vygotsky's three-part theory where an external operation becomes internal and the interpersonal process become intrapersonal; our understanding of others emotional experiences is dependent on our own healthy personality functioning in conveying trust and content to a student. Like the previous variable, *Empathic Interaction* is made up of two interdependent processes: *Vicarious Experience* (One's vicarious experience of another's emotional experiences - feeling what the other person feels) and *Interpersonal Positiveness* (Generally healthy and adjusted personality functioning reflecting skill in interpersonal understanding of positive feelings) (Mehrabian, 2000). If we consider that Vygotsky's theory involves the teacher's ability to connect with the student in order to fit into the student's intrapersonal understanding, the ability to participate and interact with fluidity is what facilitates the flow of ideas and allows for the operation (e.g., the lesson) to "stick". *Empathetic Interaction* defines our ability to engage with empathy back-and-forth and how easily we do it.

*Behavioral vs Subjective Emotional Change* (body language and facial expressions) is the ability to recognize facial expressions and interpret mood (Hornak, Rolls & Wade, 1996). It is mostly involved in the initial, middle and final parts of Vygotsky's theory (i.e., the points at which a student physically demonstrates openness to learn, frustration and that they have "got it" – the "aha" moment).

### **Purpose**

This study seeks to measure quotients of empathy in teachers to determine if empathy varies between different career lengths, age and gender and if there is a need for teachers to engage in professional development that seeks to increase and maintain empathy.

### **Statement of the Problem**

Teacher empathy may erode or drop at different career lengths, ages and gender and if it does, it must be addressed to ensure that teachers are effective in engaging and educating students.

### **Research Questions**

1. How do teachers self-report levels of empathy on a diagnostic questionnaire?
2. Does empathy vary by years of service, age or gender?

### **Delimitations**

This study will involve 1,000 teachers in the states of Nebraska and Oregon who self-report their levels of empathy on an emailed survey.

### **Limitations**

The study of empathy in adults is a new area of research with few longitudinal studies to draw from. We know little about how adult empathy increases or diminishes over the lifespan (Gruhn et. al. 2008). Empathy includes emotion and cognition and is the core of all the communicative events among us (Davis, 1994; Ickes, 1997; Singer, 2009). Our ability to empathize weighs heavily on our own development and determines our behaviors (Eisenberg, 2000; Hoffman, 1977, 2000). Since the development of empathy has been focused mainly on children and teens instead of its development in adults, there is little evidence to contrast results against average adult scores (e.g., Eisenberg & Fabes, 1990; Hoffman, 2000; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). Considering that the data from the survey is based upon a tool that only provides an objective score, it may be difficult to compare overall averages between scores in education and scores in other professions or other groups.

Research on the development of empathy in children and teens has shown that empathy develops early in simple forms (e.g., Hoffman, 1977, 2000; Singer, 2009) and then becomes more differentiated in adolescence as cognition develops (e.g., Eisenberg, 2000). Researchers focusing on stages of development across the lifespan (Erikson, 1968; Vaillant, 1977) believe that empathy levels change across adulthood, however, there is very little data to support if (or how) empathy may fluctuate among adults except that older people usually score higher on empathy than teens (Birditt & Fingerman, 2005; Gross et al., 1997; Lawton, Kleban, Rajagopal, & Dean, 1992); this creates a unique set of factors when interpreting the data from the survey.

## **Summary**

Highly empathetic teachers are capable of greater student engagement and greater engagement may lead to greater learning gains. While we do not know what level of empathy a teacher should possess, we can conclude that educators must be highly empathetic in their practice.

Gaps in communication and engagement with some groups of students are clear and evident in the widely disparate levels of college attainment for children from low-income families. Many studies attribute the low performance of students from low-income families and minority populations to be caused by a lack of engagement with their teachers. As inequality rises, the need for highly empathetic teacher leaders and practitioners continues to grow.

Precedence for this study comes from previous pilot research that found a drop in educator empathy quotients in a survey regarding educator family income and empathy (Jessen, 2015) which demonstrated a drop in empathy during the 6<sup>th</sup>-8<sup>th</sup> years of teacher career among 529 educators. The framework for this study is based on Social Learning Theory, specifically, Vygotsky's cultural-historical social theories of constructivist learning development and the relationship to the development of empathy among children and adolescents.

Using a 19-question survey of 1,000 educators, the length of educators' careers from 1-10+ years of experience, age and gender will be compared against the dependent variable of empathy quotients using the TEQ, with a specific focus on four categorical aspects of Empathy; (1) *Global Empathy*, (2) *Self/Other Oriented Feelings*, (3) *Empathetic Interaction*, and (4) *Behavioral vs. subjective Emotional Empathy*.

Differences in variance between groups will be analyzed and, based upon any apparent

fluctuations or drops in empathy experienced by groupings of teachers at different career lengths, age and gender. This treatment will use univariate ANOVA analysis, Pearson correlations and frequencies to provide the most effective method for analyzing the variables from this simple survey.

No large-scale study of empathy among education practitioners exist. This calls for drawing on different places within the literature where education, empathy and its study in the field of medicine meet. Seemingly disparate areas of research find a connecting point in teacher empathy. And, as in the context of the theoretical framework used in this study, a framework of these areas of study has to be constructed to understand the problem and solution that could be presented by any loss of empathy among teachers

Understanding possible fluctuations of empathy will determine whether or not there is a justification for implementing interventions in teacher professional development already validated and used in the field of medicine. Any sustained or extreme drops in empathy among male and female practitioners of different ages and years of experience in this study, differences in years of service or age could illuminate areas of critical need for professional development. If fluctuations are significant, it may effectively bridge a research/practice gap in education that often slows the implementation of new practices into school districts (Coburn, Penuel & Geil, 2012; Davis & Nutley, 2008; Honig & Coburn, 2008; Richardson, 1997) and become part of a school district's professional development plans for teacher practitioners and possibly the screening of potential candidates for teaching degree programs. This study considers high levels of engagement as a direct correlative to engagement between teacher and student

and infers that this engagement is essential to bridging gaps in inequality and achievement in schools.

Considering that little is known about the development and maintenance of empathy over the adult lifespan, this study could serve as both an innovative approach to informing teacher professional development and a resource for the study of adult empathy beyond the field of education research. The recruitment and maintenance of empathy in educators is of two-fold benefit for Public schools; educators may be able to meaningfully benefit from professional development that increases or sustains their ability to empathize and ease the strain of burnout, and, students who face growing inequality may benefit from teachers who know how to bridge socioeconomic and sociocultural variables that can limit communication and engagement.

The survey results from 1,000 educators from at least two regions of the country will be a large enough sample to determine if the fluctuations found in pilot research are similar to data from empirical research in the field of medical education where drops in empathy at the 3<sup>rd</sup> year of medical school have resulted in mandatory professional development in empathy. Use of the TEQ as the study's survey tool will provide a strongly validated, objective measure of empathy.

Beyond recruitment and retention, there are benefits to Educational Leadership and the administration of teachers and education professionals in understanding the role of empathy in practitioner-based environments. When considering the need for leaders who can demonstrate understanding and compassion while reacting appropriately in-the-moment and still serve as managers of teaching professionals, the need to develop highly empathetic and emotionally intelligent leaders who implicitly understand students from



different social, economic and cultural backgrounds is necessary if we want to effect change in the next generation of teachers and students.

## CHAPTER 2

### REVIEW OF THE LITERATURE

This chapter reviews the literature encompassing teacher empathy, its importance and factors that contribute to its erosion and seeks to define the role of empathy in the context of teaching and learning. The chapter also illustrates the importance of the impact that forces outside of the school have on numerous aspects of a teacher's ability to empathize with students and discusses what we know and don't know about empathy in adults as well as the role empathy plays in attracting teachers to the field of education. Most important to the issues that might impact and erode teacher empathy is a possible solution to maintaining and increasing empathy for more effective student engagement. This question of how we solve the problem if it exists needs to be answered. To address this, discussion and review of what has worked for increasing and maintaining empathy in the field of medicine to address these same problems is also covered in this chapter.

The literature review is divided into the following sections: Inequality's effect on teacher and student engagement, the different ways empathy has been defined over the last 50 years, and the erosion of empathy among trusted practitioners and empathy's role in career choice and burnout. Finally, a review of interventions in increasing and maintaining empathy in the field of medicine are discussed with focus on what has and has not been shown to be effective in increasing and maintaining empathy.

#### **Introduction to the Literature**

No one has conducted a large survey of empathy quotients among teacher practitioners before. We know there are numerous reasons that account for the critical need to develop and maintain empathy for educators and education leaders: (1) the ability to empathize is crucial to teaching and learning (2) highly empathetic teacher candidates are needed to engage with students who face barriers from outside the school, (3) successful interventions that build and maintain empathy already exist in the field of medicine and can be implemented into teacher professional development to improve engagement and communication in the classroom.

We know very little about how adult empathy increases or drops over time (Gruhn et. al. 2008). This study seeks to measure quotients of empathy; the core of all the communicative events among us (Davis, 1994; Ickes, 1997; Singer, 2009). This study draws from research that has taken place across many fields of study (e.g., Psychology, Medicine and Education) and the terminology regarding Empathy and its definition among all of these fields is varied due to its abstract emotional and concrete, actionable aspects. For example, Empathy - according to the National Institute of Child Health and Human Development and the Canadian Institutes of Health Research Center for Human Growth and Development (Spreng, McKinnon, Mar & Levine, 2009) - is considered an umbrella category that includes everything from vicarious experience to recognizing facial expressions to one's ability to manage their emotions; this broad definition is so large that it subsumes the concept of Emotional Intelligence made popular by Goleman (1995). However, Empathy (as defined by the National Institute of Child Health and Human Development and the Canadian Institutes of Health Research Center for Human Growth and Development) is not so broad as to be considered too nebulous to be defined

- it is both an emotion and an actionable skill, making it quantitatively measureable. It is unique.

The ability to empathize drives development and its effects on our behaviors (Eisenberg, 2000; Hoffman, 1977, 2000). Since the development of empathy has been focused mainly on children and teens and not adults there is a lack of evidence to compare adult results against those from children to determine subjective scores (Eisenberg & Fabes, 1990; Hoffman, 2000; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992) or even provide an idea of what a “normal” level of empathy in adults should be.

In order to review the literature that relates to the study of teacher Empathy, several different areas of research have to be considered that cross Psychology, Medicine and Education and present a picture that allows these different areas of study to coalesce into a single body of research justifying the need to study empathy in teachers.

### **Inequality’s Effect on Empathetic Engagement**

Empathy, the ability to perceiving the feelings of another as well as the capacity to do so accurately (Spreng, McKinnon, Mar & Levine, 2009; Hashimoto & Shiomi, 2002; Mehrabian, 2000; Mehrabian & Epstein, 1972; Davis, 1983, 1994), is essential to the student/teacher relationship (Hashimoto & Shiomi, 2002; Goleman, 1995). It is commonly viewed as a component of collaborative and cooperative education, an aspect of discourse or interpersonal relationships, and the key to developing tolerance and general cooperation in curriculum and classroom lessons (Ashoka, 2016; Catapano, 2016:

Hammond, 2006; McKearney & Mears, 2015; Yale Center for Emotional Intelligence, 2016).

We know that in the classroom a mutually empathetic experience is taking place during instruction as the teacher notes the nonverbal reactions of the student and monitors their engagement as they deliver instruction; the teacher modifies their delivery based upon this exchange. What is both physically and psychologically happening in this exchange was first described as a reciprocal, linear process by Lev Vygotsky in his book, *Mind and Society*, (1930-1934/1978). While Jean Piaget's work is often thought of as recognizing the importance of empathy in children his study of morality and empathy are distinct subjects compared to Vygotsky's work (if we can consider that morality would guide the aspects of empathetic engagement and not indicate empathy). While Piaget's work came prior to Vygotsky and touches upon engagement that involves empathy, it was Vygotsky that built upon Piaget's epistemological approach to demonstrate that empathy and learning blend into the same action among both the teacher and the student and result in memory of action (1930-1934/1978) (i.e., the teacher is perceiving the verbal and nonverbal reactions of students and the students learn from their subsequent empathetic interaction).

By the time a child enters school, they have developed the ability to participate in an empathetic exchange because they have developed the capacity to do so accurately enough over a long period of time with their parents and can interpret multiple aspects of engagement from other adults (Spreng, McKinnon, Mar & Levine, 2009). Their teachers become aware of the limits of their empathetic development as they work with them in the classroom and adjust instruction to meet their need. This pedagogical perspective has

created a one-sided approach to empathy in regard to teaching and learning and is limiting to a more full understanding of what happens during empathetic interaction. The study of the development of empathy in education so far has mostly been focused on students, not teachers, with results that often conclude with encouragement and advice toward teachers to be “open-minded” and to simply “use” empathy to promote a better classroom climate and have better classroom management - and by doing so - help students to understand abstract concepts like theme and omniscience in reading (Beach, 2016; Catapano, 2016; McKearney & Mears 2015; Mendes, 2003; Okonofua, Paunesku & Walton, 2016; Owen, 2015).

Many of these studies, promoting the “use” of empathy cite the effect that social disparities have on the interaction and perspectives of both student and teacher. Today, 51% (NCES, 2016) children in US public schools from low-income families come to school at a severe disadvantage in being able to relate to and engage with their teachers due solely to the wide differences of their experiences outside of the school that prevail within our society. On average, disadvantaged students receive less effective teaching than other students, equivalent to about four weeks of learning for reading and two weeks for math (NCES, 2016). These differences create societal gaps in trust and empathy that may also contribute to gaps in health and social cohesion (Wilkinson & Pickett, 2009). Empathetic engagement is directly impacted by social disparities and requires highly empathetic teachers and leaders to maintain engagement to effectively teach beyond societal barriers.

A teacher must know their students to engage in an empathetic interaction between the student and their self. (Spreng, McKinnon, Mar & Levine, 2009), however,

socioeconomic demography differs widely between the average student and their teacher because educators predominantly come from homogeneous communities of privilege (IES, 2016; NCES, 2016; Southern Poverty Law Center, 2014) and have widely different levels of education than the parents of the students they teach. During 2015-2016 academic year, 56% of teachers had a master's degree or higher (IES, 2016). 86% of the parents of low-income students did not have a high school degree (NCES, 2016). Median salary for public school teachers in 2016 was between \$47,000 to \$53,868 in current dollars (i.e., dollars that are not adjusted for inflation) (NCES, 2016), yet more than 32 million children currently live in low-income families, meaning that their family's income is below 200% of the federal poverty level - which is formulated based upon a two-parent household with two children, earning a combined income of \$24,300 or less (National Center for Children in Poverty, 2016). This means that, based upon national averages, a public school teacher makes more money than both parents combined of more than half of the students in their classroom (NCES, 2016; National Center for Children in Poverty, 2016).

In the United States, student family income is the greatest predictor of student success (Reardon, 2011; Stanford School of Education, 2012; Tavernise, 2012) which means that teachers must be highly empathetic toward the effect social disparities have on the beliefs students have about themselves and the lack of hope they may have about doing better than their parents did in their own future.

### **Ways we have known empathy over the last 50 years**

The challenge faced between meeting the perspectives of teachers and students is matched by the challenge of defining empathy among the seemingly disparate fields of

Psychology, Medicine and Education. While we can only level the playing field so much for disadvantaged students through high empathetic engagement, we can examine the synonymy of definitions and terms used across different fields of study to define empathy within education and create a simpler way to utilize research on empathy in education to make the playing field a little more clear for the purpose of study.

Emotional Intelligence may be the best starting place to begin with finding parity in defining empathy since it places empathy in the category of a “key component” and not a distinct, enveloping category on its own (Ashkanasy & Dasborough, Boyatzis & McKee, 2013: 2003; Goleman, 1995; Grewal & Davidson, 2008). Emotional Intelligence has been used to discuss empathetic interactions in less scientifically restrictive environments with context for learning that are built around stressing empathy’s importance in communication and learning within and outside of school (Ashoka, 2016: Yale Center for Emotional Intelligence, 2016). Both the fields of Psychology and Medicine have recently found agreement in terminologies and definitions after years of the development of numerous empathy scales that could not easily be compared to one another (Spreng, McKinnon, Mar & Levine, 2009) and placing Emotional Intelligence into these categories is fairly easy to accomplish and considering the flexibility that Emotional Intelligence provides in comparison to the rigidly-defined definitions of empathy in Psychology and Medicine, it is the perfect starting place for determining a definition of Empathy for this study.

However, before comparing Goleman’s Emotional Intelligence to a more broad definition of empathy, some history in the development of a definition of empathy in the fields of Psychology and Medicine needs to be considered: The sometimes disparate



fields of Medicine and Psychology contributed to the creation of the survey tool used in this study and found alignment in definition through the survey tool's creation. This approach is helpful for providing a similar method to place differing definitions of empathy in the field of education into one transdisciplinary definition,

In 2009, the National Institute of Child Health and Human Development and the Canadian Institutes of Health Research sought to create "...a brief, reliable, and valid instrument for the assessment of empathy (Spreng, McKinnon, Mar & Levine). The purpose of the study was to unify the various definitions for empathy in Psychology, Human Development, and Neuroscience under one umbrella so that it could be studied using a "...parsimonious tool to assess empathy". This tool, the Toronto Empathy Questionnaire (TEQ) (Spreng, McKinnon, Mar & Levine, 2009), serves as an example of the kind of transdisciplinary approach used in this study and used in the fields of Psychology and Medicine for bridging definitions of empathy. Since 1969, doctors and psychologists struggled with varying definitions for empathy that created discord in research findings, however, the combining of definitions under the creation and subsequent validation of the TEQ demonstrated that an emotion like empathy can be defined and measured across two different fields of study.

Emotional Intelligence is itself an area that draws from numerous fields and would not seem to fit under an umbrella of empathy as defined in the TEQ, but surprisingly it fits neatly. Empathy and Emotional Intelligence, when compared by their components or aspects, can be considered synonymous and it is important to understand their connectivity and synonymy. The term 'Emotional Intelligence' is derived from a 1964 study (Beldoch) that provides evidence of empathy as key in the conveyance of

deriving meaning from what is experienced and learned. This, in turn, helped in the development of the first validated test for empathy in 1969 (Hogan) used for diagnosing the severity of brain injury. The relationships between Emotional Intelligence (Goleman, 1995) and Empathy (described in more detail in the following paragraphs) demonstrates that the interdisciplinary scope of this emotion in learning across the Educational, Psychological and Medical fields serves to connect numerous secondary theories about leadership, education theory, learning and memory, and neuroscience together.

Empathy as an emotional ‘skill’ is an innate human capability, more than a tool to be practiced, and is key to our ability as human beings to convey knowledge, express ourselves artistically and work together to achieve a goal. According to Vygotsky, our ability to empathize to the point of being able to use our own expressive constructs and tools like writing and language is what separates us from the “Apes” (Vygotsky, 1930-1934/1978) and while shared by some animals, our ability to empathize can be said is the thing that makes us truly human.

To clarify, articulate and expand upon Empathy in general and demonstrate the synonymy of Empathy and Emotional Intelligence, the following constructs of Empathy according to the creators of the TEQ (Spreng, McKinnon, Mar & Levine, 2009) and Daniel Goleman’s popular definition of Emotional Intelligence (Goleman, 1995) need to be compared.

Figure 1 shows Goleman’s construct of Emotional Intelligence. While it may seem to be different than the construct created during the validation of the TEQ (Figure 2), both concepts and conceptual definitions are uniquely synonymous. The differences

between them are explored in the following pages and as they are matched together. It is important to note that while Emotional Intelligence appears to treat empathy as a “part” of its construct. However, when viewed and examined in comparison to the construct in Figure 2 (the TEQ), it becomes clear that it serves to open the door to defining empathy in the field of education in a way that allows for empathy to be connected to important theories about leadership, education theory, learning and memory.

Figure 1

*Goleman’s (1995) construct of Emotional Intelligence*

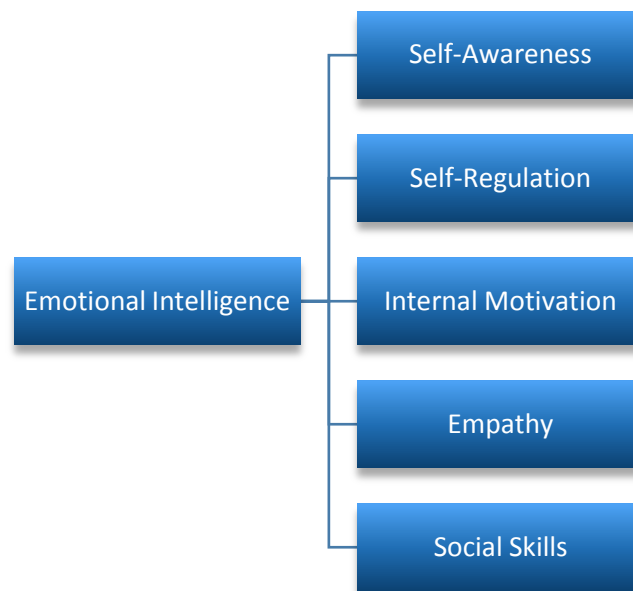
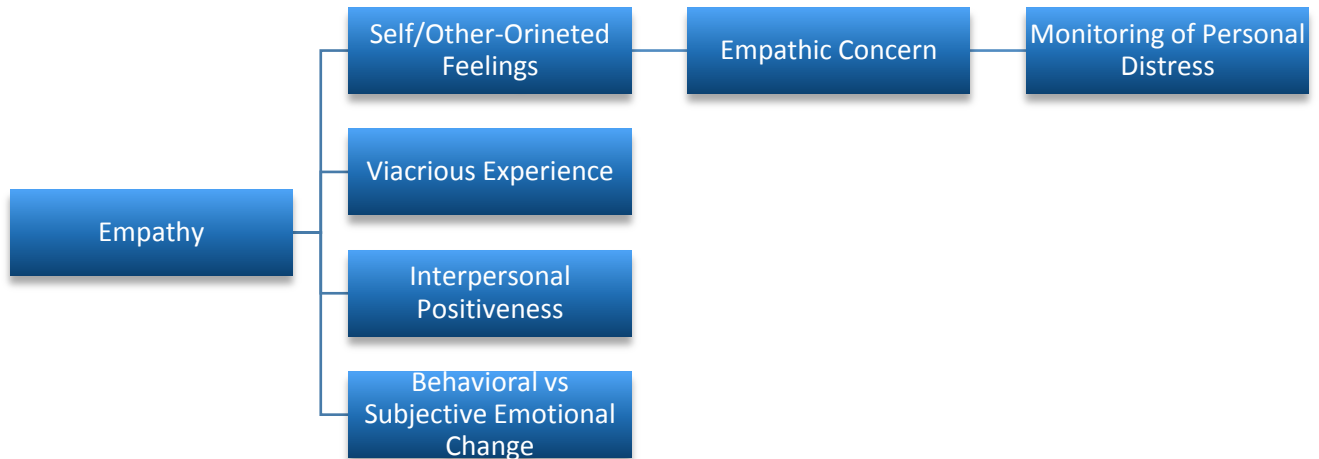


Figure 2

*Toronto Empathy Questionnaire Construct of Empathy*



Beginning with both constructs first tiers, “Empathy” (also termed “Global Empathy”), according to the (TEQ), is “...an important component of social cognition that contributes to our ability to understand and respond adaptively to others’ emotions, succeed in emotional communication, and promote prosocial behavior. In comparison, “Emotional Intelligence”, according to Goleman, is “...the ability to recognize, understand and manage our own emotions and recognize, understand and influence the emotions of others”. There is little difference among these broad categorical definitions and comparison of the aspects of these definitions brings both concepts together in a neat fit.

Self/Other oriented feelings categorized under “Empathic Concern” and “Monitoring of Personal Distress” are parts of the TEQ’s subscales that measure the ability to engage in perspective taking, fantasy and feelings of sympathy for unfortunate others (Empathic Concern) and cope appropriately with "self-oriented" feelings of personal anxiety and unease in tense interpersonal settings (Monitoring of Personal Distress). “Self-Regulation” (Goleman) is the ability to control or redirect disruptive impulses and moods, and the propensity to suspend judgment and to think before acting.

These two terms are synonymous; Self-Regulation and Self/Other-oriented feelings are the same thing, however the use of these words varies in the literature in regard to their quantitative or qualitative connotations in one field or the other in that Self/Other-oriented feelings of empathic concern and monitoring of personal distress are measureable for quantitative study and “self-regulation” lends itself to mostly qualitative measure.

“Vicarious Experience” (TEQ) is defined as “One's vicarious experience of another's emotional experiences -- feeling what the other person feels”, whereas Goleman’s (1995) definition of Empathy is “...the ability to see the world through others’ eyes.” Again, there is synonymy in definition, except that in order to lend empathy a connection to leadership, education theory, and learning and memory, it is placed by Goleman under a second tier of definition within the construct and continued comparison of terms lends itself to complete absorption of both constructs when looking further into their definitions:

“Interpersonal Positiveness” (TEQ) is the “generally healthy and adjusted personality functioning reflecting skill in “interpersonal understanding of positive feelings.” that relates to healthy and happy interpersonal relationships, career and financial success and “overall life success.” Whereas Goleman’s “internal Motivation” is composed of having a healthy inner vision so one can experience “...a passion to work for internal reasons that go beyond money and status” and is focused on the pursuit of internal rather than external rewards.

Finally, “Behavioral vs. Subjective Emotional Change” (TEQ) is the ability to recognize facial expressions and interpret mood (e.g., body language), whereas

Goleman's "Self-Awareness" is the ability to recognize and understand personal moods and emotions and drives, as well as their effect on others.

At least on recent study in empathy and engagement on the subject of classroom management has done the same. In the 2016 Stanford study published in the Proceedings of the National Academy of Sciences that used empathy as a single 'umbrella' variable for measuring emotional intelligence and demonstrated a quantitative, significant decrease on suspension rates when teachers were trained specifically in utilizing empathy in the classroom (Okonofua, Paunesku & Walton, 2016) and this use of empathy as a variable encompassing Emotional Intelligence is not new or unique. The fields of Psychology and medicine have been placing the components of Emotional Intelligence (defined by Beldoch in 1964) into a grouping under the term "empathy" and providing specific measures of each component starting in 1969 with Hogan's Empathy Measure or "EM" (Hogan, 1969) for the use of determining the diagnosis of severity in brain-injured patients. Almost 40 years later; more than a dozen highly-used and validated tools for measuring empathy have been created. These scales are combined into the TEQ (2009) which, in a 40-year period of time have seen the more abstract aspects of empathy illustrated in Goleman's later definition of Emotional intelligence, find their way back into the strengthened, transdisciplinary definition of empathy as a measureable and fully-defined variable for the purpose of quantifiable study.

Further study of the circuitous route that Emotional Intelligence has had in its initial definition within the definitions of Psychology and Medicine to its departure into the field of Education provides a more clear understanding of empathy in terms of teacher/student interaction and a foundation from which to examine empathy in learning:

The concept of Emotional intelligence from Goleman and other definitions of Emotional Intelligence from different researchers are derived from the Michael Beldoch's 1964 book, *Communication of Emotional Meaning*, which discusses empathy in nonverbal expression using vocal, music and graphic expression and the ability to relate to, understand and express an interpretation of the artist's thoughts and feelings. This act of interpreting another person's nonverbal expression was at the heart of Hogan's (1969) empathy scale and the foundation of all other empathy assessments to follow. This branching of "Empathy" and "Emotional Intelligence" and its components serves as an alternative way to define empathy outside of the rigidly-defined fields of Psychology and Medicine by breaking out the abstract and concrete elements of empathy into a framework (i.e., Emotional Intelligence) that is more accessible for interpretation and does not involve as much "unpacking" of the variable for it to be understood.

The recent 2016 Stanford Study mentioned earlier by Okonofua, Paunesku and Walton, *Brief intervention to encourage empathic discipline cuts suspension rates in half among adolescents*, placed Emotional Intelligence under the definition of Empathy and was able to prove that there is a strong correlation between empathy and classroom discipline; demonstrating a 50% drop in school suspension rates. By simply defining empathy using similar terms as those used in the TEQ in concert with Emotional Intelligence, the study was able to find a quantitative correlation. By merging Psychology, Medicine and Education together in a transdisciplinary definition of empathy, a route to transforming previous studies that were only qualitatively measureable can become quantitatively measureable using this framework and definition of empathy used in this study.

The use of a single definition that encompasses Emotional Intelligence into Empathy is now being reflected in teaching strategies and within educational leadership programs and as part of building resources for a greater rapport with students using empathy (Catapano, J. 2016; Owen, 2015). “The umbrella term of “Empathy” that includes the components of Emotional Intelligence is now found in discipline-specific pedagogical articles for understanding the motives of characters in reading (McKearney & Mears 2015), pedagogical strategies for employing and developing empathy (Ashoka, 2016) and providing different strategies to incorporate empathy and “gratitude” in the classroom (Beach, 2016). The use of term “Empathy” is now being used as a specific skill is being promoted in building positive classroom culture (Owen, 2015) and the expression of positive emotions in the classroom (Bowen; 2014).

Commonality of definitions of Empathy among Psychologists and Doctors and clinicians in the fields of medicine with the field of Education is one thing, but commonality of experience in empathetic engagement among all of these practitioners may be very different: This study seeks to determine if the same common drop in empathy in these other practitioner-based fields outside of education are experienced by teachers. A closer look at the erosion of empathy among doctors and clinicians opens the door to more effective ways to increase empathy among practitioners and clinicians to better educate patients and ultimately, support professional development practices that do so. Considering that the field of medicine has studied the erosion of empathy among doctors for two decades, an examination of the phenomena from this field is important to understanding similar and possible erosion of empathy in teachers.

### **Erosion of Empathy among Trusted Practitioners**



The study of Empathy in medical education has been ongoing for more than 20 years due to the phenomena of drop in empathy among medical students in their third year (Hojat et. al., 2009; Kane, 2007; Kataoka, 2009; Newton, 2008). Doctors enter medical school after achieving a 4-5 year degree. It is in their 3<sup>rd</sup> year of medical school when they experience a well-researched drop in empathy. In contrast, most teachers achieve a 4-year degree, spend 1-2 years obtaining a Master's Degree and then enter into the field of teaching. While time involved for entering into practice in both professions is different, there is some precedence for the expectation of erosion of empathy at a certain point among teachers but no clear reason why. Preliminary research (Jessen, 2015), found that of 529 teachers surveyed, a drop in teacher Empathy occurred between the 6<sup>th</sup> and 8<sup>th</sup> year of teaching. While not uniquely aligned, there is a linear progression that starts with preparation in college, graduate coursework or medical school and then a drop in empathy when beginning to work with patients or after a relatively short number of years working with students.

We know that similar empathetic interactions that take place between teacher and student take place between doctors and patients. Empathetic engagement and duration of contact is far shorter than in medicine and the opportunities for engagement are far fewer but more numerous. The detrimental and potentially life-threatening consequences of empathetic engagement by doctors and clinicians is apparent and since the past two decades have demonstrated the fact that drops in empathy between doctor and patient do occur at a predictable point, the call for interventions to prevent the drop have been ongoing and fruitful in discovering professional development practices that work to

improve and maintain empathy (Chen et. Al., 2012; Newton et.al. 2008; Stepien & Bernstein, 2006; Womer, Kelm & Feudtner, 2015).

**Figure 3 shows the results from a 2009 study by Kane et. al. where 456 students who entered Jefferson Medical College in 2002 (n = 227) and 2004 (n = 229) completed the Jefferson Scale of Physician Empathy at five different times during their education. Statistical analyses showed that empathy scores did not change significantly during the first two years of medical school, but did show a significant decline in empathy scores at the end of the third year which persisted until graduation. The study concluded that a significant decline in empathy occurs during the third year of medical school. The authors cited irony that the erosion of empathy occurs during a time when the curriculum is, "...shifting toward patient-care activities" when empathy is essential. The authors discussed implications for retaining and enhancing empathy due to the timing of the drop.**

Figure 3

*Changes in Mean Empathy Scores During Four Years in Medical School of 456*

*Matriculants of Jefferson Medical College in 2002 and 2004, Philadelphia,*

*Pennsylvania. From Kane GC, Gotto JL, Mangione S, West S, & Hojat M. (2007).*

*Jefferson Scale of Patient's Perceptions of Physician Empathy: preliminary psychometric data. Croatian Medical Journal, 48(1), 81-6.*

Year	Matriculants of 2002			Matriculants of 2004			All participants		
	No.	Mean	SD	No.	Mean	SD	No.	Mean	SD
0 (orientation day)	227	114.5	10.0	229	115.8	10.0	456	115.1	10.0
End of year 1	198	114.9	10.9	201	116.2	116.2	399	115.5	11.1
End of year 2	208	115.2	11.4	167	115.0	115.0	375	115.1	11.0
End of year 3	154	108.5	11.4	185	109.6	109.6	339	109.1	11.8
End of year 4	178	109.6	13.2	178	108.5	108.5	356	109.1	14.1

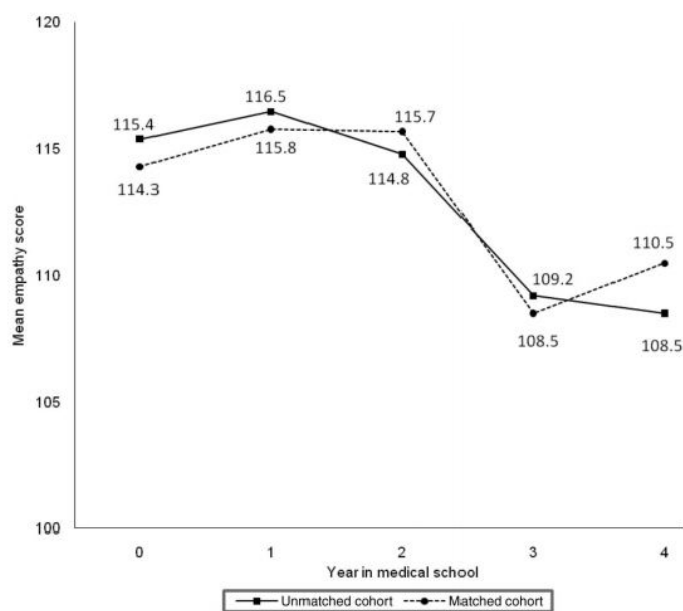
\* Total number of students varies in different years as a result of their voluntary participation.

**Figure 4 shows the changes in average scores of the 456 participants in matched and unmatched cohorts in the study. These pattern of drop and increase of empathy among both groups across the same years is indicative to the same pattern seen in teachers in prior research.**

Figure 4

*Changes in Mean Jefferson Scale of Physician Empathy in different Years of Medical School for Matched and Unmatched Cohorts at Jefferson Medical College, Philadelphia, Pennsylvania.* From Kane GC, Gotto JL, Mangione S, West S, & Hojat M. (2007).

Jefferson Scale of Patient's Perceptions of Physician Empathy: preliminary psychometric data. *Croatian Medical Journal*, 48(1), 81-6.

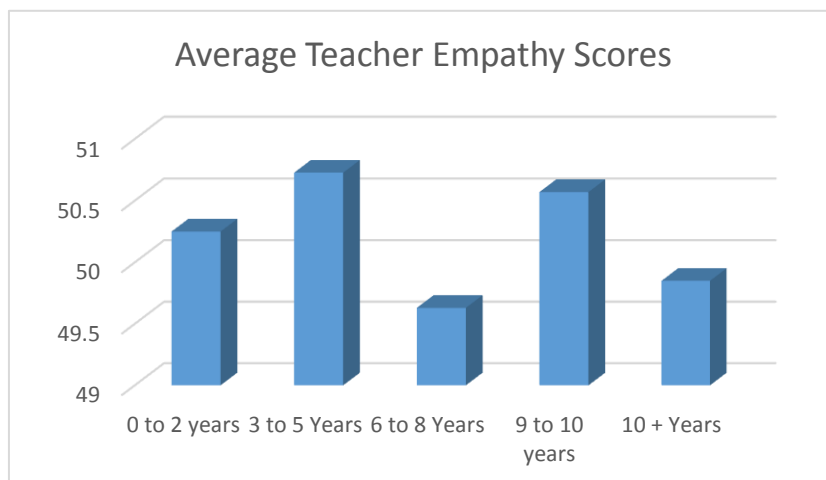


This study showed that patterns in empathy did not decline during the first two years, but did significantly decline during the third year. They also found that there was no real difference in scores between men and women. These scores confirmed the results of the 2008 study by Newton, et. al.,” Is There Hardening of the Heart During Medical School?” which found the same drop in empathy during the third year. After both of these studies, there was a question of whether or not the scores were applicable cross-culturally and in Katoaka et. al.’s 2009 study, which involved measurement of empathy among Japanese medical students, psychometric scores showed no difference by gender and average scores by level of medical education showed the same drop in empathy during the third year.

**Figure 5 presents mean empathy quotients demonstrated among 529 teachers in a study among teachers in Omaha, Nebraska as part of an informal survey (Jessen, 2015) that was designed to compare empathy quotients among teachers from different socioeconomic backgrounds and how they empathize with students from low-income families. The survey contained items adapted from the TEQ and others for the measure of teacher’s attitudes and beliefs about low-income students. When removing the questions on teacher attitudes and beliefs from the other survey items and examining only the items derived from the Toronto Empathy Questionnaire, the same drop in empathy as seen in Kane et. al., Kataoka et. al. and those presented in Hojat et. al.**

Figure 5

*Average Teacher Empathy Scores Among 529 Teachers, Omaha, Nebraska*



My preliminary, informal research (Jessen, 2015) demonstrated a similar drop in empathy among educators between their 6<sup>th</sup> and 8<sup>th</sup> years

of teaching. However, this study was focused on empathy toward students from low-income families by teachers and the items surveyed from the TEQ were interspersed among survey items about student family income, possibly skewing the results (*See Appendix B*).

Successful interventions have been identified that have been shown to be effective in maintaining and even improving empathy over time (Stepien & Bernstein, 2006). Empirical research from the field of medicine for highly empathetic doctors and nurses (Pedersen R., 2009) has called for these interventions to be used to maintain and increase empathy due to the proven drop in empathy among doctors in their 3rd year (Hojat et. al., 2009; Kane, 2007; Kataoka, 2009; Newton, 2008) and these interventions have been used consistently and have been heavily researched for validity and effectiveness (Kane et. al., 2007). However, before discussing interventions used to increase and maintain empathy in the field of medicine, it is important to recognize the coincidental links between drops in empathy another factor in its erosion among teachers – burnout.

Examining burnout and empathy is important because teacher burnout is well-researched and the conclusion of numerous studies indicate that erosion of empathy takes place when burnout occurs. This calls for a closer look at burnout, empathy, and the reasons for a career choice of teaching and what this says about teacher levels of empathy when entering the profession.

### **Empathy's Role in Career Choice and Burnout**

It is well-known that a drop in empathy is congruent with burnout. In 2012, The British Journal of General Practice presented findings from a survey of burnout among medical professionals that presented different theories on the reasons for burnout among doctors (Zenasni, Boujut, Woerner & Sultan, 2012) and stated that “Burnout is in part defined by a depersonalization attitude: it favors dehumanization in social interactions, and probably a significant decrease of overall empathy.” This raises an important question about the need for maintaining empathy among teachers in the prevention of teacher flight from the profession. Considering the coincidence of a drop in empathy preceded by increased turnover, the maintenance of empathy may be key in reducing turnover and burnout in teachers

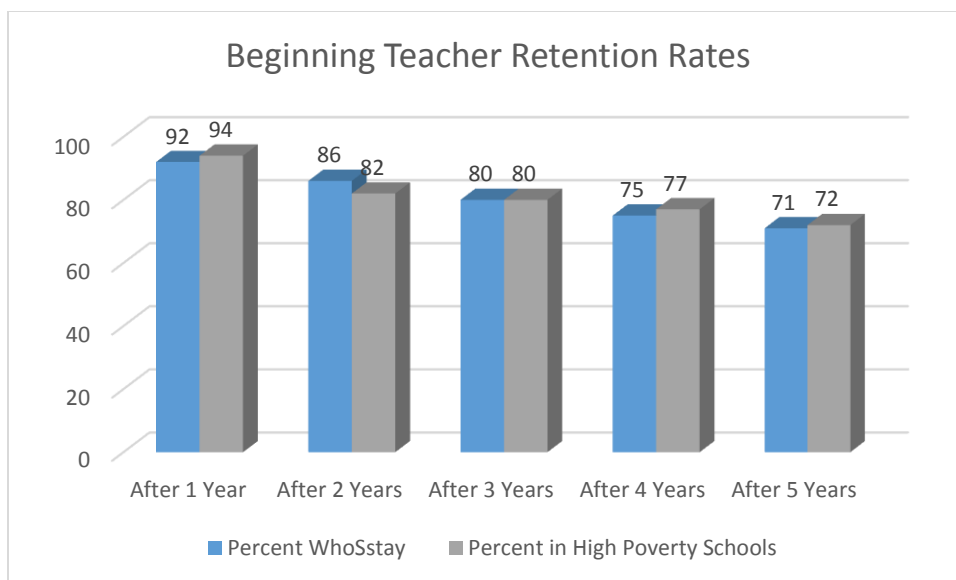
In general, large surveys of teachers show that new teachers leave on average in 3 to 5 years due to lack of administrative support and isolation (Headden, 2014). Attempts to study teacher turnover and “peak” of teaching ability show that most teachers reach the highpoint of their teaching skills after three to five years when performance is measured by student scores on standardized tests (NEA, 2014b). The ending of this post-peak height of teaching coincides with prior research (Jessen, 2015) which showed drops in empathy during the 6-8<sup>th</sup> years of teaching. While we know that long periods of stress

outside of work lead to burnout and erosion of empathy is part of burnout, we don't know that erosion of empathy *causes* burnout.

**Figure 6 represents data from a 2015 Center for American Progress article by Robert Hanna and Kaitlin Pennington that examined recent teachers staffing surveys several recent and U.S. Department of Education National Center for Education Statistics studies. It provides a picture of teacher turnover that is not as extreme as rates in prior year and presents the least amount of turnover; showing that only a third of new teachers leave the profession in their first five years. Still, this number in its most conservative representation is significant, and, considering that year five of teaching represents the highpoint of turnover, the beginning of the drop at years 6-8 of teaching seems to fit with the presence of turnover but not enough to attribute it to the cause of burnout or even say what it is that is causing the erosion of empathy – we just know that it takes place and they could be mutual events taking place due to single or many factors. What we do know is that erosion of empathy leads to poor engagement and without the ability to engage with high empathy, the job of teaching becomes an even greater challenge.**

Figure 6

*New Teacher Retention Rates Derived from Data and Graphics* recreated from Hannah, R. & Pennington, K. (2015). *Despite Reports to the Contrary, New Teachers Are Staying in Their Jobs Longer*. Center for American Progress. Posted on January 8, 2015, 10:15 am. Derived January 1, 2017



We know that empathy may be a factor in entering the field of teaching as well as staying in it; choice of a career in education often elicits the notion of “calling” (Whitbeck, 2000). Those who experience a stronger sense of “calling” in career choice tend to have “lower levels of negative thinking” (Galles & Lenz, 2013) and many teachers believe that “that they only need to relate well to students for the students to learn and enjoy being in their classrooms.” (Whitbeck, 2000). There is a strong amount of evidence that people who choose majors outside of the applied sciences in general do so out of a pursuit for “intellectual stimulation, variety, cultural aesthetics interests, self-transcendence” and “social contribution” over “personal achievement and social recognition” (Balsamo, Lauriola & Saggino, 2013); those who seek a career in education may do so because of an innately higher amount of empathy and intellectual stimulation.

Most new teachers will start their careers immediately after earning their bachelor’s degrees and do not exceed this level of education, others will enter the profession after a year or more in another job (Anderson 2008; Provasnik & Dorfman, 2005). Their ability to empathize, based upon their own experience may be limited and



detrimental to a long-term career if burnout and erosion of empathy are linked to some common factor. It is important to note that some teachers have so little experience outside of their own backgrounds to even be able to empathize with groups of students outside their own background that they mistake students who do not have the prerequisite skills due to factors related to income and mobility and mistakenly label students from low-income families as learning disabled (Howard, Dressler & Dunklee, 2009). This kind of lack of empathy due to inexperience is troubling for maintaining public respect of the education profession and supports the need to understand teacher empathy, career-choice and burnout, but also makes the call for interventions in empathy that have proven to be effective all the more important.

### **Successful Interventions for Increasing and Maintaining Empathy**

Empathy in the medical setting is the appreciation of the patient's emotions and expression of that awareness to the patient. Named as an essential learning objective by the American Association of Medical Colleges, empathy is believed to significantly influence patient satisfaction, adherence to medical recommendations, clinical outcomes, and professional satisfaction (Stepien & Bernstein, 2006).

Stepien & Bernstein's 2006 publication, *Educating for empathy. A review*, searched PubMed for studies that address the effectiveness of strategies for teaching empathy to medical students and identified 13 peer-reviewed, English language, qualitative and quantitative studies reporting primary data on interventions that aim to foster empathy in medical students. These studies indicated that empathy may be increased through a range of interpersonal strategies. Communication skills workshops addressing the behavioral dimension of empathy showed greatest quantitative impact on

participants. (Stepien & Bernstein, 2006). The caveat to their extensive research (13 peer-reviewed studies spanning 30 years) was that the most current studies on maintaining and developing empathy are challenged by the differing definitions of empathy that are used in the fields of medicine and psychology, the small sample sizes used for many studies, lack of adequate control groups, and a lack of a common instrument to measure empathy in the studies.

Despite challenges to testing different interventions for the erosion of empathy, it was found that interventions that involved interpersonal communications and learning about the different aspects of empathy and implications in practice was shown to be most effective in increasing and maintaining empathy (Stepien and Bernstein, 2006).

**Figure 7 represents the analysis by Stepien and Bernstein of behavioral interventions for empathy. The effect sizes of the studies that involved interpersonal and communications workshops demonstrate the significance of these interventions as having strong potential for the increase and maintenance of empathy in teachers. The behavioral interventions took place over a relatively short duration of time and may appear to fit the need of teacher professional development better than other approaches reviewed by Stepien and Bernstein.**

Figure 7

*Quantitative Studies Focusing on Behavioral Interventions on Empathy* from Stepien, K. A., & Bernstein, A. (January 01, 2006). Educating for empathy. A review. *Journal of General Internal Medicine*, 21, 5, 524-30.

Aspect	Study	Participants	Intervention	Outcome Measure	Results	Effect Size of statistically significant changes
BEHAVIORAL	Kramer et al	RCT 40 students in 1 <sup>st</sup> clinical yr	Interpersonal skill workshop given in 5 h over 5 wks	Observed 2 interviews (not validated)	Effect lasted at 6 and 12 months	Pre- to postint: 2.0 imm 2.4 at 6 mos 1.3 at 12 mos Control to int: 2.0 imm 2.1 at 6 mos 1.9 at 12 mos
	Evans et al	RCT 55 students in 1 <sup>st</sup> clinical yr	11 hours of communication and skills workshop	IRI AES HRS subset	Only HRS subset showed change	Pre- to post int: 0.45 on HRS Control to int: 1.6 on HRS
	Poole and Sanson-Fischer	Longitudinal controlled 45 students in final clinical year who had intervention during preclinical training	16 h of audiotape-led communication skill workshop	AES	Effect lasted at 3 yrs	Pre- to postint 217.8 imm 6.5 at 3 years Control to int: 2.1 at 3 yrs
	Sanson-Fischer and Poole	Prospective controlled 112 preclinical students	16 h of audiotape-led communication skill workshop	AES		Pre- to post int: 9.1 Control to int: 6.1
	Winefield and Chur-Hansen	Pre-post comparison 107 preclinical students	3h of communication skill workshop	Written empathy test (not validated)		Pre- to post int: 1.7
	Fine and Therrien	Prospective controlled 43 self-selected preclinical students	12 h interpersonal skill workshop	Modified AES (not validated)		Statistically significant changes but not enough data to calculate effect size

IRI=Interpersonal Reactivity Index=Validated, written self-evaluation

AES=Accurate Empathy Scale=Validated, assessment by trained observer

HRS=History-taking Rating Scale=Validated, assessment by trained observer (spec to medicine)

**Figure 8 represents Stepien and Bernstein’s analysis of emotive and cognitive interventions in empathy interventions. While these studies demonstrated increases in empathy, their impact is difficult to determine despite qualitative conclusions of increases in empathy. Of course, any intervention in empathy should result in some increase, the notable lack of a large number of participants and focus on many hours of coursework demonstrate a longer-term approach; one that may be better suited for teacher candidates in degree programs due to the 8 hours to 6 weeks of time involved in their methods of intervention. This appears to be an area of empathy intervention that lacks a larger sample of participants to draw definitive conclusions from.**

Figure 8

*Quantitative and Qualitative Studies Focusing on Emotive and Cognitive Interventions*

on Empathy from Stepien, K. A., & Bernstein, A. (January 01, 2006). Educating for empathy. A review. Journal of General Internal Medicine, 21, 5, 524-30.

Aspect	Study	Participants	Intervention	Outcome Measure	Results	Effect Size of statistically significant changes
EMOTIVE AND COGNITIVE	Shapiro et al	Modified cohort controlled study 22 self-selected preclinical students; randomized to experimental and control groups	8 h literature and medicine course	ECRS, BEES, Qualitative group interview	BEES showed benefit Qualitative analysis showed student's understanding of pt became more complex and detailed	Pre- to postint on BEES: 0.59
	Shapiro and Hunt	Case study of 69 self selected-students	Attend theatrical performance	Informal feedback		Increased empathy reported (qualitative study)
	DasGupta and Charan	Case study of 11 self-selected preclinical students	6 wk Reflective writing seminar	Qualitative analysis of written course evaluations		Increased empathy reported (qualitative study)
	Lancaster et al	Case study of 5 self-selected students in first clinical year	4 wk/16 h literature and medicine course	Qualitative analysis of written responses to course questions		Increased empathy reported (qualitative study)

ECRS=Empathy Construct Rating Scale=Validated, written self-evaluation  
BEES=Balanced Emotional Empathy Scale=Validated, written self-evaluation

**Figure 9 represents the self-care and experimental interventions that consist of interventions that were not fully-participated in, were composed of a small sample size and a long period of time, as in the emotive and cognitive interventions, or contained components like the addition of spirituality classes that would be hard to replicate among public school teachers. While the findings do demonstrate increases in empathy, it is difficult to draw upon them as possible templates for professional development, however, they do represent approaches that could possibly be used along with other intervention approaches.**

Figure 9

*Quantitative and Qualitative Studies Focusing on Experiential and Self-care*

*Interventions on Empathy* from Stepien, K. A., & Bernstein, A. (January 01, 2006).

Educating for empathy. A review. *Journal of General Internal Medicine*, 21, 5, 524-30.

Aspect	Study	Participants	Intervention	Outcome Measure	Results	Increased Empathy Reported
EXPERIENTIAL	Henry-Tillman et al	Pre-post comparison of 87 preclinical students; 59 other students were assigned to intervention but did not complete it	Accompany and assist patient during 1 clinical visit	Written survey (not validated) Qualitative analysis of group discussion	No significant change on written survey	Yes
	Wilkes et al	Case study of 9 self-selected preclinical students	Student hospitalization experience lasting 24-30h	Qualitative analysis of verbal responses		Yes
SELF-CARE	<a href="#">DiLalla et al</a>	Cross-sectional survey 1181 students and physicians at various levels of training and practice	Empathy, spirituality, and wellness courses of unspecified length	ESWIM (written, not validated)		Empathy score higher for students who attended wellness courses or Empathy + Spiritual courses, Spiritual but no empathy = lower scores

ESWIM=Empathy, Spirituality, and Wellness in Medicine survey (specific to medicine, not validated)

## Summary

The formal surveying of empathy among teachers to determine if empathy might erode or drop has never been done. For educational leaders, knowing that empathy could erode among teachers or if it tends to drop in a given time period is of extreme value for many reasons: preventing burnout among staff, increasing learning gains and recruiting highly empathetic teachers who can effectively engage students are just a few. Just as different challenges have risen over time, the traits and qualities of leaders have changed with various results (Kirkpatrick & Locke, 1991; Lord, DeVader & Alliger, 1986; Mann, 1959; Stogdill, 1948, 1974) high empathy is needed in educational leadership and an absence of a study specific to teacher empathy creates a gap in our understanding of how we might recruit and prevent the burnout of quality teachers. Most important is the impact that each individual teacher has on a given student and the importance of ensuring

that this interaction is meaningful and as fruitful as possible. There is a need to know if teacher empathy changes at different career lengths, ages or differs by gender and this currently does not exist in the literature.

We know that the gap between students from low-income families and other students could be the greatest contributor to the achievement gap (Barton, 2004; Becker & Luther, 2002; Cooper, 2007; Headden, 2014; Miranda, et. al., 2009; NEA, 2014b)) It continues to increase between rich and poor students (Tavernise, 2012) and is exacerbated by a gap between research and practice that stifles the flow of research-based interventions into the classroom (Coburn, Penuel & Geil, 2012; Coburn, & Stein, 2010; Cooper, 2007; Davies & Nutley, 2008; Fleischman, 2006; Honig & Coburn, 2008), creating a less-likely scenario for change (Coburn, Penuel & Geil, 2012; Coburn, & Stein, 2010; Cooper, 2007; Honig & Coburn, 2008). All of this points to a need for highly empathetic leaders and practitioners. Considering that few studies shed light on the development or diminishment of empathy in adults (Gruhn et. al. 2008) and that the study of the development of empathy has traditionally occurred among children, a study on teacher empathy holds benefits to more than just the field of Education but lends itself to the study of empathy in the fields of Psychology and Medicine. Since the available literature does not contain large-scale surveys of teacher empathy, surveying teacher empathy benefits Educational Leadership for the purpose of better administration of teachers and education professionals. Considering the need for leaders who can demonstrate understanding and compassion while reacting appropriately in-the-moment and still serve as managers of teaching professionals, the need to develop highly

empathetic and emotionally intelligent leaders who implicitly understand students from different social, economic and cultural backgrounds is clear.

## CHAPTER 3

### RESEARCH METHODS

The purpose of this study is to measure levels of empathy in teachers to determine whether or not empathy fluctuates higher or lower for those who have been teaching for longer or shorter periods of time, by age and by gender. The Toronto Empathy Questionnaire (TEQ) will be used to determine objective quotients of empathy among participants. Analysis of survey data is intended to demonstrate whether educators experience similar fluctuations in empathy experienced by practitioners in the field of medicine. This Study will illuminate whether empathic variables (*Global Empathy, Self/Other Oriented Feelings, Empathetic Interaction and Behavioral vs. subjective Emotional Empathy*) increase or decrease in teachers *more or less* than others at different career lengths, by age and by gender.

#### Variables

1. *Global Empathy (8 Items)* - The ability to feel others' positive feelings (Hashimoto & Shiomi, 2002); the intellectual or imaginative apprehension of another's condition or state of mind (Hogan, 1969); a vicarious emotional response to the perceived emotional experiences of others (Mehrabian & Epstein, 1972); perceiving the feeling state of another as well as the capacity to do so accurately (Spreng, McKinnon, Mar & Levine, 2009). **8 Items**



2. *Self/Other Oriented Feelings (4 Items)* – Empathic Concern and Monitoring of Personal Distress are combined due their interdependence in the cycle of transaction described in both actions/emotions):
- a. *Empathic Concern* - Fantasy, Perspective Taking, feelings of sympathy and concern for unfortunate others. (Cliffordson, 2002).
  - b. *Monitoring of Personal Distress* --"self-oriented" feelings of personal anxiety and unease in tense interpersonal settings (Davis, 1983).
3. *Empathetic Interaction (3 Items)* - Vicarious experience and Interpersonal Positiveness are combined due their interdependence in the cycle of transaction described in both actions/emotions):
- a. *Vicarious Experience* - One's vicarious experience of another's emotional experiences -- feeling what the other person feels.
  - b. *Interpersonal Positiveness* - Generally healthy and adjusted personality functioning reflecting skill in interpersonal understanding of positive feelings (Mehrabian, 2000).
4. *Behavioral vs. Subjective Emotional Change (1 Item)* – The ability to recognize facial expressions and interpret mood (Hornak, Rolls & Wade, 1996).

**Figure 10 shows the source of each variable under the survey item appearing in order on the TEQ and its category of empathetic variable.**

Figure 10

*Survey Tool Distribution of Variables and Sources*

Item	Category	Source
1	Global Empathy	(Hashimoto & Shiomi, 2002 & Mehrabian, 1996)
2	Self/Other-Oriented Feelings	(Davis, 1983)
3	Empathetic Interaction	(Mehrabian, 2000)
4	Empathetic Interaction	(Hornak, Rolls & Wade, 1996 & Mehrabian, 2000)
5	Global Empathy	(Hogan, 1969)
6	Self/Other-Oriented Feelings	(Davis, 1983)
7	Global Empathy	(Mehrabian & Epstein, 1972)
8	Behavioral Vs. Subjective Emotional Change	(Hornak, Rolls & Wade, 1996)
9	Global Empathy	(Hogan, 1969)
10	Empathetic Interaction	(Mehrabian, 2000)
11	Global Empathy	(Hogan, 1969 & Mehrabian, 2000)
12	Global Empathy	(Hogan, 1969 & Mehrabian, 2000)
13	Global Empathy	(Hogan, 1969 & Mehrabian, 2000)
14	Self/Other-Oriented Feelings	(Davis, 1983)
15	Global Empathy	(Mehrabian & Epstein, 1972)
16	Self/Other-Oriented Feelings	(Davis, 1983)

### **Research Questions**

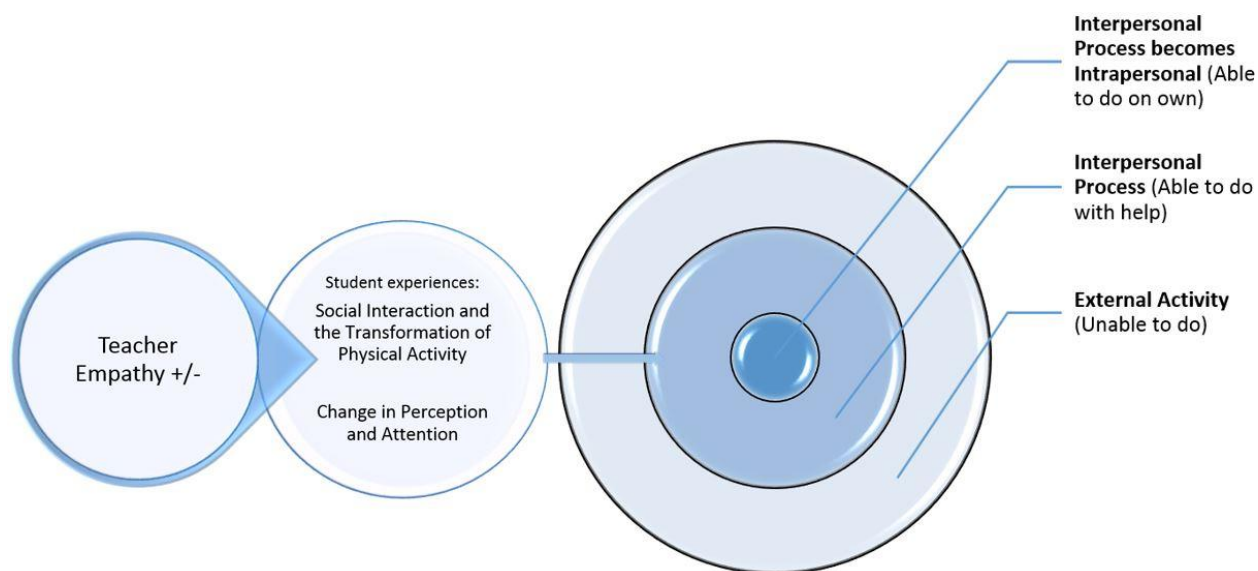
3. How do teachers self-report levels of empathy on a diagnostic questionnaire?
4. Does empathy vary by years of service, age or gender?

### **Conceptual Framework**

The guiding framework for defining and justifying the study of empathy quotient in educators is based in Lev Vygotsky's concept of Social Interaction and the Transformation of Practical Activity defined in *Mind in Society* in 1930, Vygotsky (1930-1934/1978). Specifically, the Social Interaction and the Transformation of Practical Activity is the conceptual framework Vygotsky theorized that bridged the gap between Social Interaction and the Transformation of Practical Activity and The Development of Perception and Attention in his theory of Tool and Symbol in Child Development.

**Figure 11 demonstrates the conceptual framework for the study; the teacher's empathetic engagement takes form in the transformation of physical activity and change in perception and attention concur on the part of the student. This process takes place within the context of an external activity that becomes an interpersonal process and then becomes interpersonal.**

Figure 11



### *Conceptual Framework*

### **Research Methodology**

The independent variable of length of educator career, age and gender will be compared against the dependent variable of empathy quotients in educators. The dependent variable will be measured by using the TEQ in a 20-question survey using a 0-4 Likert scale and resulting in an objective score for empathy. A list of 4,000 email addresses of licensed educators from the Nebraska and Oregon departments of education will be used for the distribution list. Oregon and Nebraska differ in terms of geography, race, economy and politics, creating an opportunity to ensure that the sample does not reflect data on one region of the country. The survey will be sent via email,

The empathy questionnaire will provide an objective score on a unidimensional scale of empathy composed of multiple measures. Variables in the questionnaire are composed of several broad definitions of Empathy with specific focus on four specific categorical areas of Empathy; (1) *Global Empathy*, (2) *Self/Other Oriented Feelings*, (3)

*Empathetic Interaction, and (4) Behavioral vs. Subjective Emotional Empathy.* Each of these variables will be measured by current year of experience at 1-10+ years, by age and gender across a large sample of 1,000 public school educators. The survey will be administered online and emailed to an initial batch of 4,000 respondents in at least two geographically and socioeconomically different regions of the country with an intended response rate of 25%.

### **Data Collection**

A 19-question survey will seek a sample of approximately 1000 respondents - this is a realistic goal for data collection and a large enough number for a strong sample considering the data analysis to be used for the study (i.e., sample sizes between years of experience, age and gender must be large enough when disaggregated to compare with ANOVA tests). The survey will consist of the 16-question, and 3 demographic questions (years of experience, age, and gender).

The survey will be administered online and emailed to an initial batch of 4,000 respondents with an intended response rate of 25%.

### **Data Analysis**

Assuming that responses are not heavily skewed and there are a sufficient number of responses, frequencies will be obtained and Pearson correlations will be run on all variable and ANOVA tests for variance will be conducted across the range of all variables with Tukey post-hoc analysis. This treatment will provide the most effective method for analyzing the variables from this simple survey as the key variables are few and the demographic questions are also few in number. The amount of possible instances

of significance in either correlation or variable will be easy to identify. ANOVA variances with Tukey post-hoc tests will be the primary indicator of significance in survey responses; frequencies (strong indicators considering the large sample size) and Pearson correlations will be used as secondary sources of evidence of significance discovered in ANOVA tests.

Variance in these specific areas of empathy: (1) *Global Empathy*, (2) *Self/Other Oriented Feelings*, (3) *Empathetic Interaction*, and (4) *Behavioral vs. subjective Emotional Empathy.*, should shed light on areas for recruitment and maintenance of empathy in educators at different career lengths, by age and by gender. Comparison of all these variables against the demographic variables of (1) years of experience, (2) age (at 5-year intervals) and, (3) gender, should demonstrate whether there is any variance among demographic groups.

**Figure 12 shows the available frequencies to be derived from the data; Item-by-item analysis, Analysis of Empathy variables, Analysis of demographic total averages and averages broken-out across years of experience, age (at 5-year intervals) and gender. Each of these categories will be compared within their categories and against each other using Pearson correlations and ANOVAS.**

Figure 12

*Map of Data to be Analyzed*

Item	Global Empathy	Self/Other Oriented Feelings	Empathetic Interaction	Behavioral Vs. Subjective Emotional Change	Average	Average	Average	Average
					Score - Years Exp.	Score - Age	Score - Male	Score - Female
1. When someone else is feeling excited, I tend to get excited too	X				X	X	X	X
2. Other people's misfortunes do not disturb me a great deal		X			X	X	X	X
3. It upsets me to see someone being treated disrespectfully			X		X	X	X	X
4. I remain unaffected when someone close to me is happy			X		X	X	X	X
5. I enjoy making other people feel better	X				X	X	X	X
6. I have tender, concerned feelings for people less fortunate than me		X			X	X	X	X
7. When a friend starts to talk about his/her problems, I try to steer the conversation towards something else	X				X	X	X	X
8. I can tell when others are sad even when they do not say anything				X	X	X	X	X
9. I find that I am "in tune" with other people's moods	X				X	X	X	X
10. I do not feel sympathy for people who cause their own serious illnesses			X		X	X	X	X
11. I become irritated when someone cries	X				X	X	X	X
12. I am not really interested in how other people feel	X				X	X	X	X
13. I get a strong urge to help when I see someone who is upset	X				X	X	X	X
14. When I see someone being treated unfairly, I do not feel very much pity for them		X			X	X	X	X
15. I find it silly for people to cry out of happiness	X				X	X	X	X
16. When I see someone being taken advantage of, I feel kind of protective towards him/her		X			X	X	X	X
<b>AVERAGE TOTAL QUOTIENT</b>	X	X	X	X				
<b>Average Total Years Exp:</b>								
1	X	X	X	X				
2	X	X	X	X				
3	X	X	X	X				
4	X	X	X	X				
5	X	X	X	X				
6	X	X	X	X				
7	X	X	X	X				
8	X	X	X	X				
9	X	X	X	X				
10+	X	X	X	X				
<b>Average Total Quotient - Age:</b>								
21-25	X	X	X	X				
26-30	X	X	X	X				
31-35	X	X	X	X				
36-40	X	X	X	X				
41-45	X	X	X	X				
46-50	X	X	X	X				
51-55	X	X	X	X				
56-60	X	X	X	X				
61-70	X	X	X	X				
75+	X	X	X	X				
<b>Average Total Quotient - Men</b>								
	X	X	X	X				
<b>Average Total Quotient - Women</b>								
	X	X	X	X				

## Study Timeline and Pilot Research

The study will take place in the spring of 2017 among 1,000 respondents in at least two diverse geographical areas. A pilot study (Jessen, 2015) found an initial fluctuation in teacher empathy quotients among 526 participants having 6-8 years of experience (See Appendix B). This 19-question survey will confirm or refute those findings. The survey will be distributed using Survey Monkey Silver.

## Limitations

The study of empathy in adults is a new area of research with few longitudinal studies to draw from. We know little about how adult empathy increases or diminishes over the lifespan (Gruhn et. al. 2008). Empathy includes emotion and cognition and is the core of all the communicative events among us (Davis, 1994; Ickes, 1997; Singer, 2009). Our ability to empathize weighs heavily on our own development and determines our behaviors (Eisenberg, 2000; Hoffman, 1977, 2000). Since the development of empathy has been focused mainly on children and teens instead of on its development in adults there is little evidence to contrast results against average adult scores (e.g., Eisenberg & Fabes, 1990; Hoffman, 2000; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992).

Considering that the data from the survey is based upon a tool that only provides an objective score, it may be difficult to compare overall averages between scores in education and scores in other professions or other different groups. However, the research on the development of empathy in children and teens has shown that empathy develops early in simple forms (e.g., Hoffman, 1977, 2000; Singer, 2009) and then becomes more differentiated in adolescence as cognition develops (e.g., Eisenberg, 2000). Researchers focusing on stages of development across the lifespan (Erikson, 1968; Vaillant, 1977) believe that empathy levels change across adulthood, however, there is very little data to support if or how empathy may fluctuate among adults except that older people usually score higher on empathy than teens (Birditt & Fingerman, 2005; Gross et al., 1997; Lawton, Kleban, Rajagopal, & Dean, 1992) as well as in studies that measure experience and empathy (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000).

## **Summary**



The purpose of this study is to measure empathy quotients among educators with experience at 1-10+ years, by age and by gender. Specifically: *Global Empathy, Self/Other Oriented Feelings, Empathetic Interaction, and Behavioral vs. subjective Emotional Empathy* will be compared against demographic information (years of experience, age and gender).

Guided by a constructivist framework based upon Vygotsky's cultural-historical learning theory, possible fluctuations in empathy at different career-points will be compared in order to provide specific areas of focus for recruitment and professional development of highly empathetic teacher practitioners.

Frequencies, Pearson Correlations and ANOVAs will be used to analyze the data.

## **CHAPTER 4**

### **RESEARCH FINDINGS**

This study sought to measure quotients of empathy in teachers. The study had a dual purpose of helping to determine if empathy varies between different years of service, age or gender and if there might be a need for teachers to engage in professional development that seeks to increase and maintain empathy. The analysis of the data derived from responses follows, broken out by years of service, age and gender.

#### **Response Rate**

Invitations to 5,756 teachers and 1,418 responses were collected for a response rate of 25%. The 19-item survey comprised of the Toronto Empathy Questionnaire (TEQ) (Spreng, McKinnon, Mar & Levine, 2009) was launched on Thursday, April 6<sup>th</sup>, 2017 and was closed on Monday, April 10<sup>th</sup>, 2017. Survey Monkey was used to distribute and collect responses. Email addresses of respondents were obtained prior from publicly available Department of Education lists of licensed teachers and publicly available district directories.

#### **Determination of Sample Size**

Of the 1,418 responses collected, 244 attempted the survey but did not complete it and these attempts were thrown out. A count of  $n = 1,173$  responses remained and these comprise the total sample for the study. Completion was determined by responses to all demographic question being present; demographic questions made up the last three items on the survey tool meaning that respondents may have skipped a question, yet still completed the remainder of the survey. Skipped questions were still counted and resulted

in “0” scores for a given question. Instructions to the respondents indicated that they could skip questions if they wished to.

### **Clustering of Survey Items into Variable Groups**

The variable of Global Empathy, an overall measure of all empathy the teacher possesses, was comprised of 8 survey items (1, 5, 7, 9, 11, 12, 13, 15). The variable of Self/Other-Oriented Feelings, a measure of perspective-taking and self-restraint, was comprised of items (2, 6, 14, 16). The variable of Empathetic Interaction, a measure of the healthy performance of dynamic empathetic engagement, was comprised of items (3, 4, 10). Behavioral Versus Subjective Emotional Change (i.e., body language), was comprised of 1 survey item (8).

### **Interpretation of Responses**

The average Empathy Quotient (score) of the 1,173 respondents who completed the survey was 47.2. More females responded to the study than males (981 female respondents and 193 male respondents). Most respondents (73%) had ten or more years of teaching experience. Respondent ages were evenly distributed. Responses overall demonstrated scores of 3s and 4s on average for each survey item on a 0-4-point scale and the same pattern was reflected among the study variables.

Figure 13

*Respondent Gender*

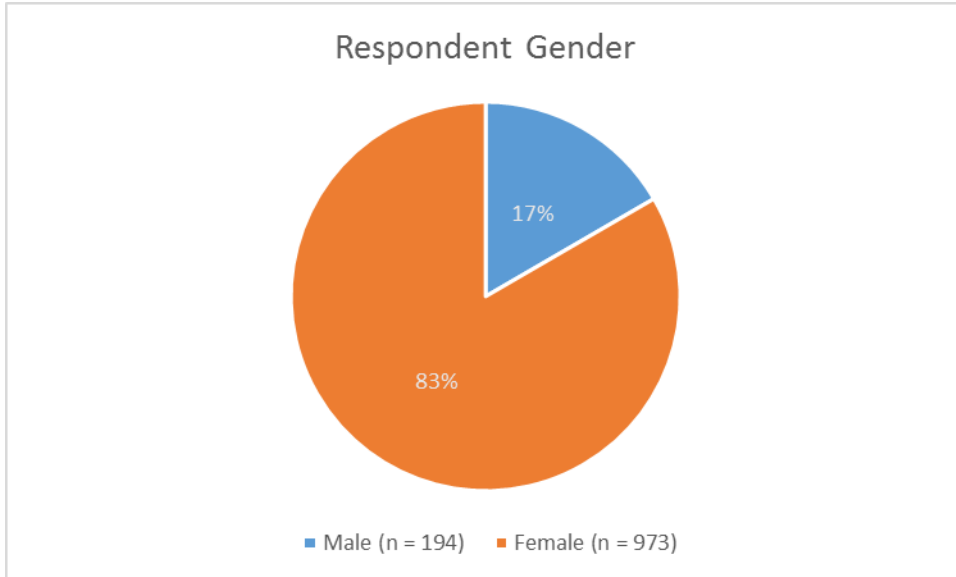


Figure 14

*Respondent Years of Service*

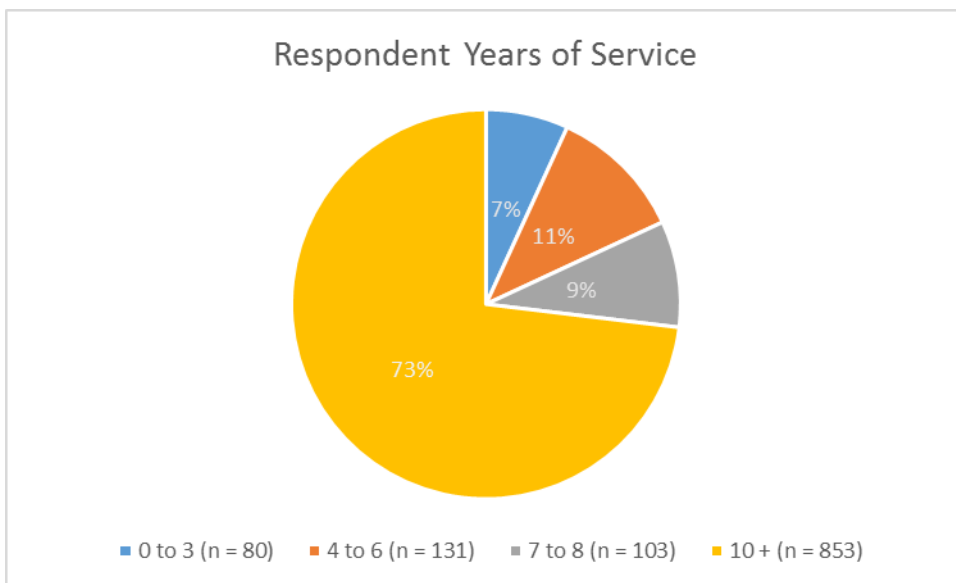
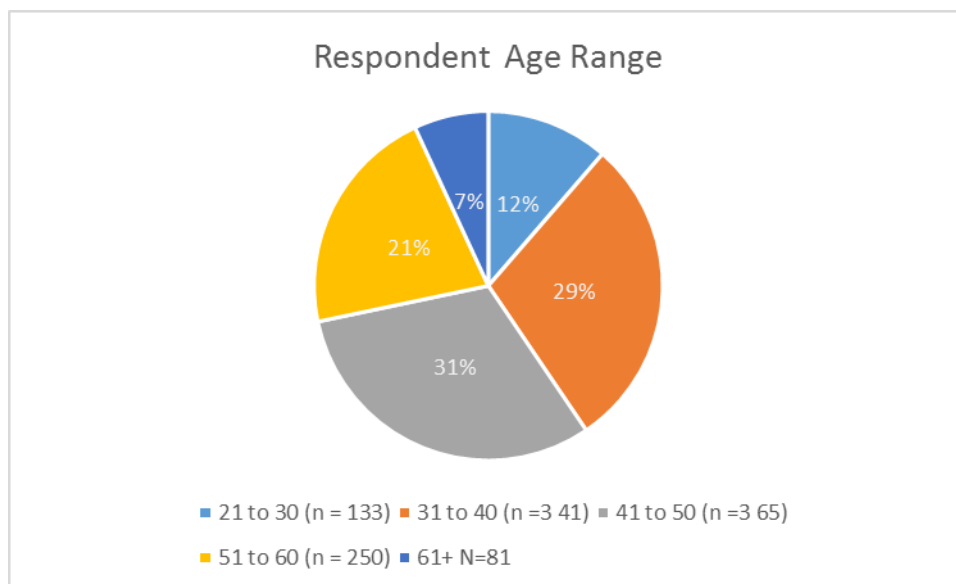


Figure 15

**Respondent Age Ranges**



## Research Questions

1. How do teachers self-report levels of empathy on a diagnostic questionnaire?

### Frequency of Responses?

Table 1 shows the frequency of responses among all groups in their self-reported responses on the Toronto Empathy Questionnaire.

**Table 1**

*Frequency of Response Selection by Teachers on the Toronto Empathy Questionnaire*

Never	Rarely	Sometimes	Always	Often
0	1	2	3	4
$f$	$f$	$f$	$f$	$f$

---

It upsets me to see someone being treated disrespectfully	0	1	33	378	757
I remain unaffected when someone close to me is happy	4	16	119	702	327
I do not feel sympathy for people who cause their own serious illnesses	11	94	459	461	142
I have tender, concerned feelings for people less fortunate than me	0	7	156	637	366
When I see someone being treated unfairly, I do not feel very much pity for them	8	12	34	458	438
Other people's misfortunes do not disturb me a great deal	18	118	412	499	114
When I see someone being treated unfairly, I do not feel very much pity for them	8	12	34	458	438
I can tell when others are sad even when they do not say anything	0	10	228	802	127
I find that I am "in tune" with other people's moods	1	19	275	751	123

I get a strong urge to help when I see someone who is upset	4	17	199	659	288
When someone else is feeling excited, I tend to get excited too	2	21	336	681	133
I enjoy making other people feel better	0	2	29	416	724
When a friend starts to talk about his\her problems, I try to steer the conversation towards something else	1	18	220	680	252
I become irritated when someone cries	3	24	236	642	264
I am not really interested in how other people feel	10	27	84	487	342
I find it silly for people to cry out of happiness	3	18	76	279	582

Average responses to survey items by age group shared similar median averages with the exception of three instances of differences among groups (*I can tell when others are sad even when they do not say anything; When I see someone being taken advantage of, I feel kind of protective towards him\her; I become irritated when someone cries; I find it silly for people to cry out of happiness*).

### **Years of Service**

**Table 2 shows median responses by years of service and significance of variance.**

**Table 2**

*Median Responses and Significance for Years of Service Among Individual Survey*

*Items and Variables*

	0 to 3 (n = 80)	4 to 6 (n = 131)	7 to 9 (n = 103)	10+ (n = 853)	
	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>Sig</i>
Item					
It upsets me to see someone being treated disrespectfully	3.6	3.6	3.5	3.6	$p = 0.197$
I remain unaffected when someone close to me is happy	3.1	3.1	3.1	3.2	$p = 0.64$
I do not feel sympathy for people who cause their own serious illnesses	2.6	2.4	2.5	2.6	$p = 0.133$
I have tender, concerned feelings for people less fortunate than me	3.1	3.1	3.2	3.2	$p = 0.24$



When I see someone being taken advantage of, I feel kind of protective towards him\her	3.0	3.0	3.2	3.1	$p = 0.037^*$
Other people's misfortunes do not disturb me a great deal	2.6	2.6	2.5	2.5	$p = 0.14$
When I see someone being treated unfairly, I do not feel very much pity for them	3.4	3.4	3.5	3.4	$p = 0.645$
I can tell when others are sad even when they do not say anything	2.8	2.9	2.9	2.9	$p = 0.547$
I find that I am "in tune" with other people's moods	2.7	2.8	2.9	2.8	$p = 0.051$
I get a strong urge to help when I see someone who is upset	3.0	3.0	3.0	3.1	$p = 0.704$
When someone else is feeling excited, I tend to get excited too	2.8	2.9	2.8	2.8	$p = 0.295$
I enjoy making other people feel	3.6	3.6	3.5	3.6	$p = 0.526$

better

When a friend starts to talk about his\her problems, I try to steer the conversation towards something else	3.1	3.0	3.0	3.0	$p = 0.677$
I become irritated when someone cries	3.0	2.9	3.0	3.0	$p = 0.32$
I am not really interested in how other people feel	3.2	3.1	3.3	3.2	$p = 0.666$
I find it silly for people to cry out of happiness	3.4	3.4	3.7	3.5	$p = 0.048^*$
Global Empathy	23.5	23.7	23.7	23.6	$p = 0.973$
Behavioral vs Subjective Empathy	2.8	2.9	2.9	2.9	$p = 0.547$
Self/Other-Oriented Feelings	11.5	11.4	11.6	11.4	$p = 0.957$
Empathetic Interaction	9.2	9.1	9.1	9.3	$p = 0.355$

Average responses to survey items by years of service shared similar median averages to all respondents with the exception of three instances of differences among groups (*When I see someone being taken advantage of, I feel kind of protective towards him\her*  $F(3,1158) = 2.837, p = .037,$ , a Tukey post-hoc test showed no significance among groups; *I find it silly for people to cry out of happiness*  $F(3, 942) = 2.645, p =$

.048.), a Tukey test showed significance ( $p < .05$ ) for teachers who had been teaching for more than 10 years).

## Age

**Table 3 shows median responses by age group and significance in variance**

**Table 3**

### *Median Responses by Age and Significance*

	21 to 30 (n = 133)	31 to 40 (n = 341)	41 to 50 (n = 365)	51 to 60 (n = 250)	61+ (n = 81)	
	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>Sig</i>
Item						
It upsets me to see someone being treated disrespectfully	3.6	3.6	3.6	3.7	3.7	p = .195
I remain unaffected when someone close to me is happy	3.1	3.1	3.2	3.2	3.2	p = .331
I do not feel sympathy for people who cause their own serious illnesses	2.4	2.6	2.6	2.5	2.7	p = .273
I have tender, concerned feelings for people less fortunate than me	3.1	3.1	3.2	3.2	3.3	p = .108

When I see someone being taken advantage of, I feel kind of protective towards him/her	3.0	3.0	3.1	3.2	3.2	p = .012*
Other people's misfortunes do not disturb me a great deal	2.6	2.5	2.5	2.4	2.3	p = .032
When I see someone being treated unfairly, I do not feel very much pity for them	3.4	3.4	3.4	3.4	3.5	p = .706
I can tell when others are sad even when they do not say anything	2.8	2.9	2.9	2.9	2.9	p = .637
I find that I am "in tune" with other people's moods	2.7	2.9	2.9	2.8	2.8	p = .058
I get a strong urge to help when I see someone who is upset	3.0	3.0	3.0	3.1	3.1	p = .376
When someone else is feeling excited, I tend to get excited too	2.8	2.9	2.7	2.8	2.7	p = .093
I enjoy making other people feel better	3.6	3.6	3.6	3.5	3.6	p = .505

When a friend starts to talk about his\her problems, I try to steer the conversation towards something else	3.0	3.0	3.0	2.9	3.1	p = .048*
I become irritated when someone cries	2.9	3.0	2.9	3.1	3.1	p = .025*
I am not really interested in how other people feel I find it silly for people to cry out of happiness	3.2	3.2	3.2	3.1	3.2	p = .797
	3.4	3.5	3.5	3.5	3.6	p = .585
Global Empathy	23.8	23.8	23.3	23.4	24.1	p = .246
Behavioral vs Subjective Empathy	2.8	2.9	2.9	2.9	2.9	p = .637
Self/Other-Oriented Feelings	11.5	11.5	11.4	11.4	11.5	p = .946
Empathetic Interaction	9.1	9.2	9.3	9.3	9.5	p = .462

Average responses to survey items by age shared similar median averages to all respondents with the exception of four instances of differences among groups (*Other people's misfortunes do not disturb me a great deal* ( $F = (4, 1153) = 2.644$ ,  $p = .032$ ), a Tukey post-test affirmed the significance ( $p < .05$ ) between groups and those 61 and over and other groups; *When I see someone being taken advantage of, I feel kind of protective towards him\her* ( $F(4,1160) = 3.225$ ,  $p = .012$ ), a Tukey test demonstrated significance ( $p < .05$ ) between 31 - 40 years-olds and other groups); *When a friend starts to talk about his\her problems, I try to steer the conversation towards something else*

( $F(4,1163) = 2.403$ ,  $p = .048$ , a Tukey test showed significance ( $p < .05$ ) between aged 51 to 60 and other groups: *I become irritated when someone cries* ( $F(1,1161) = 2.794$ ,  $p = .025$ ), a Tukey test showed significance ( $p < .05$  between the 41 – 50 group and other groups).

## Gender

**Table three shows responses by men and women, showing significant differences between their responses on 13 of the 16 items on the questionnaire.**

Table 3

### *Median Responses by Gender and Significance*

	Male ( $n =$ 194)	Female ( $n =$ 973)	
	<i>M</i>	<i>M</i>	<i>Sig</i>
Item			
It upsets me to see someone being treated disrespectfully	3.4	3.7	$p < .001^*$
I remain unaffected when someone close to me is happy	2.9	3.2	$p < .001^*$
I do not feel sympathy for people who cause their own serious illnesses	2.3	2.6	$p < .001^*$

I have tender, concerned feelings for people less fortunate than me	2.9	3.2	p < .001*
When I see someone being taken advantage of, I feel kind of protective towards him\her	3.0	3.1	p = .003*
Other people's misfortunes do not disturb me a great deal	2.2	2.6	p < .001*
When I see someone being treated unfairly, I do not feel very much pity for them	3.5	3.4	p = .061
I can tell when others are sad even when they do not say anything	2.7	2.9	p < ,001*
I find that I am "in tune" with other people's moods	2.6	2.9	p < ,001*
I get a strong urge to help when I see someone who is upset	2.7	3.1	p < ,001*
When someone else is feeling excited, I tend to get excited too	2.5	2.8	p < ,001*
I enjoy making other people feel better	3.5	3.6	p = ,009*

When a friend starts to talk about his\her problems, I try to steer the conversation towards something else	2.8	3.0	p < ,001*
I become irritated when someone cries	2.8	3.0	p < ,001*
I am not really interested in how other people feel	3.2	3.2	p = .278
I find it silly for people to cry out of happiness	3.6	3.5	p = .188
Global Empathy	22.4	23.8	p < ,001*
Behavioral vs Subjective Empathy	2.7	2.9	p < ,001*
Self/Other-Oriented Feelings	10.8	11.6	p < ,001*
Empathetic Interaction	8.5	9.4	p < ,001*

Differences in responses were found between men and women on each of the 4 variables (Gender and Global Empathy ( $F = (1, 1165) = 24.688, p < .001$ ); Gender and Behavioral Versus Subjective Empathy ( $F = (1, 1165) = 15.749, p < .001$ ); Gender and Self/Other-Oriented Feelings ( $F = (1, 1165) = 20.819, p < .001$ ), and Empathetic Interaction ( $F = (1, 1165) = 66.311, p < .001$ ).

### All Variances

**Table 4 groups all variances together by Item across all demographic groups. One survey item demonstrated significant variance across each demographic group**



*(When I see someone being taken advantage of, I feel kind of protective towards him\her).*

Table 4

*Summary of Significance by Item*

Item	Years of Service (n = 1173)	Age (n = 1173)	Gender (n = 1173)
	Sig	Sig	Sig
It upsets me to see someone being treated disrespectfully	p = 0.197	p = .195	p < ,001*
I remain unaffected when someone close to me is happy	p = 0.64	p = .331	p < ,001*
I do not feel sympathy for people who cause their own serious illnesses	p = 0.133	p = .273	p < ,001*
I have tender, concerned feelings for people less fortunate than me	p = 0.24	p = .108	p < ,001*
When I see someone being taken advantage of, I feel kind of protective towards him\her	p = 0.037*	p = .012*	p = .003*

Other people's misfortunes do not disturb me a great deal	p = 0.14	p = .032	p < ,001*
When I see someone being treated unfairly, I do not feel very much pity for them	p = 0.645	p = .706	p = .061
I can tell when others are sad even when they do not say anything	p = 0.547	p = .637	p < ,001*
I find that I am "in tune" with other people's moods	p = 0.051	p = .058	p < ,001*
I get a strong urge to help when I see someone who is upset	p = 0.704	p = .376	p < ,001*
When someone else is feeling excited, I tend to get excited too	p = 0.295	p = .093	p < ,001*
I enjoy making other people feel better	p = 0.526	p = .505	p = ,009*
When a friend starts to talk about his\her problems, I try to steer the conversation towards something else	p = 0.677	p = .048*	p < ,001*
I become irritated when someone cries	p = 0.32	p = .025*	p < .001*
I am not really interested in how other people feel	p = 0.666	p = .797	p = .278

I find it silly for people to cry out of happiness	p = 0.048*	p = .585	p = .188
Global Empathy	p = 0.973	p = .246	p < ,001*
Behavioral vs Subjective Empathy	p = 0.547	p = .637	p < ,001*
Self/Other-Oriented Feelings	p = 0.957	p = .946	p < ,001*
Empathetic Interaction	p = 0.355	p = .462	p < ,001*

## 2. Does empathy vary by years of service, age or gender?

Yes. Males demonstrated far lower quotients of empathy than women ( $F = (1, 1165) = 43.332, p = <.001$ ). Empathy does vary by demographic groups. Minimal variances were found in groups disaggregated by years of service and age. Numerous variances were found between gender. Among the study variables, Gender showed significance between groups on each variable (Global Empathy ( $F = (1, 1165) = 24.688, p < .001$ ), Behavioral Versus Subjective Empathy ( $F = (1, 1165) = 15.749, p < .001$ ), Self/Other-Oriented Feelings, ( $F = (1, 1165) = 20.819, p < .001$ ) and Empathetic Interaction ( $F = (1, 1165) = 66.311, p < .001$ )).

## CHAPTER 5

### DISCUSSION

#### Summary

The overriding purpose of this study was to measure quotients of empathy in teachers. The survey was designed to determine if empathy varied between different career lengths, age and gender and if data supported a need for teachers to engage in professional development to increase and maintain empathy. It was distributed to 5,756 teachers and received 1,418 responses from the states of Nebraska and Oregon who self-reported answers anonymously. All respondents were asked to provide answers to the questionnaire's 16 questions and 3 demographic questions (years of experience, age and gender).

The average Empathy Quotient (score) of the 1,173 respondents who completed the survey was 47.2. Far more females responded to the study than males (981 female respondents and 193 male respondents). Most respondents (73%) had ten or more years of teaching experience. Respondent ages were evenly distributed. Responses overall demonstrated scores of 3s and 4s on average for each survey item on a 0-4-point scale and the same pattern was reflected among the study variables.

The distribution of empathy quotients appeared normal for empathy across respondents. The response to the survey by those that had taught for 10 or more years was large. This was an unanticipated result. However, subgroups were large enough for analysis of variance.

Clearly there was a disparity between male and female respondents to the survey and many more females than males responded to the survey, however, subgroups maintained a sample size large enough for analysis of variance. While more women are teachers in general, the number of responses by women to the survey were high.

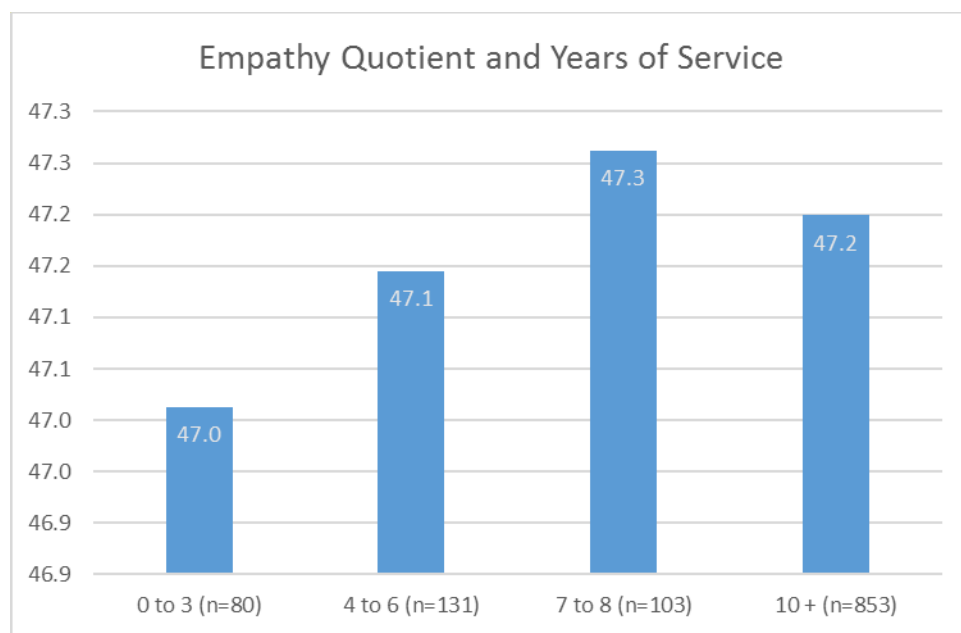
The following discusses the survey results by demographics:

### Years of service

**Figure 16 demonstrates an emergent pattern of increasing empathy over years of service.**

Figure 16

#### *Empathy Quotients by Years of Service*



A pattern emerged in respondent empathy quotients and years of service. While there was no significance between years of service and any of the study variables, there

were specific survey items that demonstrated significance in responses by years of service and these support the emergent pattern of responses indicating lower levels of empathy by teachers with 0-3 years of experience (47), moderate empathy quotients by teachers in their 4<sup>th</sup> to 6<sup>th</sup> and 10 + years of teaching (47.1 and 47.2 respectively) and a higher amount of empathy among teachers in their 7<sup>th</sup> to 9<sup>th</sup> years of teaching (47.3).

Specific survey Items:

*I find that I am “in tune” with other people’s moods*

ANOVA testing showed significance for years of service and Item 9 ( $F(1,1161) = 2.601, p = .051$ ). Among groups, teachers who had taught 10 or more years reported higher amounts of being “in tune” than any other group ( $F(1,1161) = 2.601, p = .046$ ). A Tukey test demonstrated significance in the variance between groups ( $p < .05$ ), and teachers who had taught 7-9 years also showed a significant difference ( $p < .05$ ), also reporting being “in tune” with other people’s moods more often than teachers with 0-6 years of experience. The variance between teachers who had taught 7-9 years only showed  $p = .051$  significance, placing teachers in the 7-9 years of service group behind those with more than 10 years of experience.

*I find it silly for people to cry out of happiness*

A one-way ANOVA showed significance between groups  $F(3, 942) = 2.645, p = .048$ . A Tukey test showed significance ( $p < .05$ ) for teachers who had been teaching for more than 10 years, indicating that they did not find it as silly for people to cry out of happiness than teachers with fewer years of service.

*When I see someone being taken advantage of, I feel kind of protective towards him\her*

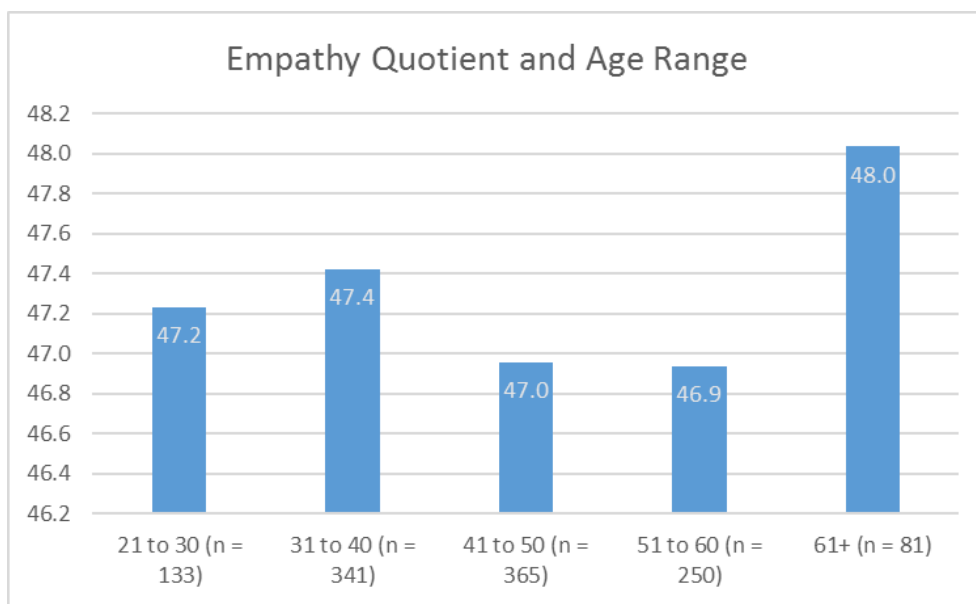
This question showed significance between years of service and reporting feeling protective of people who is being taken advantage of ( $F(3,1158) = 2.837, p = .037$ ), however, a Tukey post-hoc test showed no significance among groups, indicating that teachers with greater years of service demonstrate greater empathy overall toward people being taken advantage of and an accompanying feeling of protection toward them.

## Age

**Figure 17 demonstrates the emergent pattern of difference in empathy quotients by age.**

Figure 17

### *Empathy Quotients by Age Range*



While there was no significance between age and the study variables; only specific survey items demonstrated significance in responses by age. There appeared to be an emergent pattern of responses that indicate lower levels of empathy from teachers

aged 41 - 60 (47 and 46.9 respectively) and ages 21 - 40 showing higher average empathy quotients (47.1 and 47.2 respectively). Respondents who were 61 and older demonstrated significantly higher quotients of empathy on average (quotient of 48).

Specific survey Items:

*Other people's misfortunes do not disturb me a great deal*

There was a significant variance ( $F = (4, 1153) = 2.644, p = .032$ ) among groups found in ANOVA testing with the 61 and over age-group demonstrated the most significant difference between groups ( $p = .0237$ ). A Tukey post-test affirmed the significance ( $p < .05$ ) of the variance for the 61 and over age group, indicating that this group reported that other people's misfortunes affected them more strongly than other groups.

*When I see someone being taken advantage of, I feel kind of protective towards him\her*

This question demonstrated significance ( $F(4,1160) = 3.225, p = .012$ ), a Tukey test demonstrated significance ( $p < .05$ ) between 31 - 40 years-olds and other groups, indicating that 31 – 40 year-olds reported slightly higher amounts of empathy than others regarding feeling protective toward someone being taken advantage of.

*When a friend starts to talk about his\her problems, I try to steer the conversation towards something else*

51 – 60 year olds demonstrated significantly higher responses indicating they try to steer conversations toward something else when talking about their friend's problems ( $F(4,1163) = 2.403, p = .048$ , a Tukey test showed significance ( $p < .05$ ).



*I become irritated when someone cries*

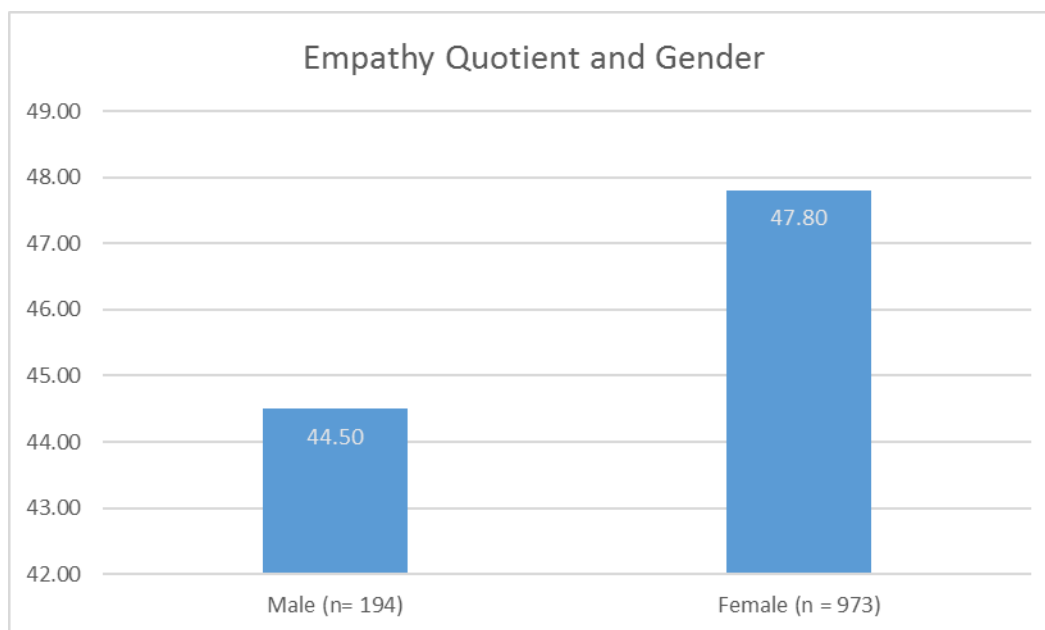
41 – 50 year olds, more than any other group, reported feeling irritated when someone cries ( $F(1,1161) = 2.794, p = .025$ ), a Tukey test showed significance ( $p < .05$  between the 41 – 50 group and other groups).

**Gender**

**Figure 18 shows the significant disparity between respondent gender and empathy quotient.**

Figure 18

*Empathy Quotient and Gender*



**Figure 19 shows the empathy scores from the three studies used in the validation of the empathy questionnaire and the similarity in mean empathy quotients in the survey.**

Figure 19:

Average empathy quotients by gender compared to the averages derived during the validation of the TEQ.

Mean Empathy Scores by Gender from the Toronto Empathy Questionnaire Validation Compared to this Study		
	Male	Female
TEQ Study 1	44.5	44.6
TEQ Study 2	43.5	48.9
TEQ Study 3	43.6	48.3
<b>This Study</b>	<b>44.5</b>	<b>47.8</b>

Means for gender (44.5 for males and 47.8 for females) were consistent with the three studies used in the validation of the TEQ. Males demonstrated far lower quotients of empathy than women ( $F = (1, 1165) = 43.332, p = <.001$ ).

These differences and associated patterns of responses that presented patterns in Years of Service and Age can be addressed through a combination of interventions that have proven to be effective in raising and maintaining empathy in the field of medicine in conjunction with existing interventions in the field of education.

There are patterns of lower and higher quotients of empathy present in years of service and age and significant variances existed for every variable by gender.

Differences in empathy quotients among all demographic variables were expected and the pattern in empathy quotients by years of service matches the patterns in prior research (Jessen, 2015).

## Conclusions

Data from the survey suggests that women demonstrate the highest quotients of empathy. The differences between men and women were significant and present

implications for education practice and education leadership. Empathy quotients reveal a pattern that showed a steady increase in empathy by years of service until after 7-9 years where may then begins to erode. Empathy appears to possibly rise and fall among age groups, increasing from 21-39 and then dropping from 40-60 where it then rises considerably after 61 years of age.

Average empathy quotient were equal to those reported during the validation of the TEQ. While respondents met these averages neatly, there was some precedent to expect higher levels of empathy in teachers on average. However, teachers were no different than others in their quotients of empathy.

The variables in the study which contained grouped survey items that made up the study's 4 variables only showed strong statistical significance in quotients by gender. Among the study variables, all were significant.

Years of service and age response patterns stand out for their ambiguity; they match patterns from previous research (Jessen, 2015) and yet lack of strong statistical significance in this study. A question arises as to whether these scores, in consideration of the large sample size, averaged themselves out so much as to no longer demonstrate significance, or whether the size of differences among empathy quotients is even significant. Considering that the survey contained only 16 questions measuring empathy, each with a maximum value of 4 (on a scale of 0 to 4), a difference of .5 between one group to another should be seen as significant.

### **Interventions for increasing empathy in practitioners**

Stepien and Bernstein's 2006 study of 13 peer-reviewed studies for increasing and maintaining empathy in medical students and doctors demonstrated that "Communication skill workshops addressing the behavioral dimension of empathy show greatest quantitative impact on participants." (Stepien & Bernstein, 2006). This mix, or addition, of learning about empathy combined with interpersonal communication training appear to be the most consistent and quantitatively measurable strategy for increasing and maintaining empathy that can be derived from interventions used in the field of medicine. However, alternatives to communication skills workshops and teaching about the dynamics of empathy is only one choice of effective interventions.

Some of the interventions that have shown success in increasing empathy involve small groups where the use of audio and video of people demonstrating empathy in interactive situations has been shown to be effective for people to watch and grasp concepts through visual representation and acting out empathetic demonstrations and actions. Some of these interventions have been shown to result in significant increases in empathy from pre to post testing during the intervention. In this same vein, interventions have involved theater, literature, and writing to evoke empathy in participants. This approach creates an immersion effect where participants' empathy is evoked in a way that allows them to relate to the experience of others and gain a better understanding of others perspectives.

Other interventions involve participants putting themselves in the place of the population they are interacting with (e.g., putting themselves in the place of the student) and experiencing interaction through this perspective.

Stepien and Bernstein also discuss the aspect of teaching about empathy through greater promotion of wellness programs in general. Paying attention to health, getting exercise and enjoying happiness with family, friends and others or working on hobbies and finding philosophical or even spiritual enlightenment might also invoke a greater sense of empathy in teachers. Stepien and Bernstein's review of interventions showed that participants who had chosen to attend sessions on wellness had higher empathy scores.

### **Implications**

More than anything, empathy in terms of education and the practice of teaching and leadership must have a clear definition and its dimensions well understood so that it can be tested in long-term interventions in the same way that the Toronto Empathy Questionnaire (TEQ) (Spreng, McKinnon, Mar & Levine, 2009) was originally created to determine a measure of empathy between the fields of medicine and education; this is where the four variables in this study provide a clear definition of the aspects of empathy and, considering their measurability through the TEQ, are both convenient and associated with a validated measure of empathy that can be used to determine the effectiveness of a given intervention across disciplines.

Regarding teacher education, a non-invasive practice of allowing prospective students entering teaching to participate in a questionnaire like the TEQ and see their score reported to them may help them in making an informed choice to pursue the profession or not. A score far below average might indicate that education may not be a good career choice. In addition, offering screening of potential students who may be an excellent fit for pursuing a career in education but have not yet considered it may also

lead to capturing more potential teachers who exhibit the empathetic qualities needed to thrive in the field. The ability to judge one's own level of empathy (and possible growth or diminishment of empathy) may be helpful as a self-evaluative tool in choosing a career in education and for self-monitoring throughout a teacher's education and career.

In addition, the creation of a tool that might incorporate both assessment of empathy and burnout in one survey may prove useful to practitioners and education leaders. This tool could be easily created through a validation of a combination of a burnout inventory (several exist) and the TEQ. This would be a relatively simple process and would help administrators in their efforts to prevent turnover and improve the wellness of their teachers as well as teacher candidates in teacher preparation programs.

### **Recommendations for Administrators and Practitioners**

Administrators need to understand the role of empathy in engaging with students and the nature of empathy to differ by gender. They need to understand that stressors outside of work, and not work itself, has been shown to erode empathy and that there are methods for increasing and maintaining empathy and improve student engagement.

Practitioners must gain an understanding of the dynamics and definition of empathy, the signs that people display when it is eroding within themselves and be provided with resources they can access through the district to help them whether it is an EAP program or workshops. Practitioners also need to recognize the importance of taking refresher courses on interpersonal skills and empathy; they need to realize that people continue to mature and change throughout adulthood and with that might come a rise and fall in empathy.

### **Recommendations for Improving this Study**

A follow-up to the initial measure of empathy quotients in this study would serve to strengthen the results and further define the pattern of fluctuations shown through this survey. Therefore, a longitudinal study using the same group of educators and the same instrument should be conducted, possibly with the same population again 3 to 10 years later when respondents will have moved from one demographic group to another regarding career length or age range. This change over time would serve to provide deeper insights into the changes in empathy that teachers experience over the course of their career or as they age. Further research should seek to determine why male teachers demonstrate lower levels of empathy than women.

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## APPENDIX A: Survey Tool

Below is a list of statements. Please read each statement *carefully* and rate how frequently you feel or act in the manner described. Circle your answer on the response form. There are no right or wrong answers or trick questions. Please answer each question as honestly as you can.

1. When someone else is feeling excited, I tend to get excited too
2. Other people's misfortunes do not disturb me a great deal
3. It upsets me to see someone being treated disrespectfully
4. I remain unaffected when someone close to me is happy
5. I enjoy making other people feel better
6. I have tender, concerned feelings for people less fortunate than me
7. When a friend starts to talk about his\her problems, I try to steer the conversation towards something else
8. I can tell when others are sad even when they do not say anything
9. I find that I am "in tune" with other people's moods
10. I do not feel sympathy for people who cause their own serious illnesses
11. I become irritated when someone cries
12. I am not really interested in how other people feel
13. I get a strong urge to help when I see someone who is upset
14. When I see someone being treated unfairly, I do not feel very much pity for them
15. I find it silly for people to cry out of happiness
16. When I see someone being taken advantage of, I feel kind of protective towards him\her

Scoring Item responses are scored according to the following scale for positively worded items 1, 3, 5, 6, 8, 9, 13, 16. Never = 0; Rarely = 1; Sometimes = 2; Often = 3; Always = 4. The following negatively worded items are **reverse scored**: 2, 4, 7, 10, 11, 12, 14, 15. Scores are summed to derive total for the Toronto Empathy Questionnaire.

17. How many years have you been Teaching?

18. What is your age?

19. Are you male or female?

## APPENDIX B: Preliminary Research

(Jessen, 2015):

### **Empathy in Educators by Socioeconomic Background**

#### **Independent Study**

**Josh Jessen**

**Fall, 2015**

#### **Research Problem**

Empathy is the ability to feel others positive feelings (Hashimoto & Shiomi, 2002). It is the intellectual or imaginative apprehension of another's condition or state of mind (Hogan, 1969), a vicarious emotional response to the perceived emotional experiences of others (Mehrabian & Epstein, 1972). It is essential in the interaction between teacher and student for the most basic of reasons; the student must feel understood and must understand the teacher. In this mutual experience, the teacher models behavior during instruction and watches the nonverbal reactions of the student to see if they are engaged. Empathy is key to the interaction that takes place in the education process between teacher and student.

The need to retain teachers and administrators during a time when schools are becoming more and more strained by the challenges of economic inequality will require a close look at teacher empathy. Since at least 2012, socioeconomic status has become the national indicator of student success with the achievement gap between children from high- and low-income families is roughly 30 to 40% larger among children born in 2001 than among those born twenty-five years earlier (Reardon, 2011). On average, disadvantaged students received less effective teaching than other students, equivalent to about four weeks of learning for reading and two weeks for math (NCES, 2014). This has created societal gaps in trust and empathy that may also contribute to gaps in health and social cohesion (Wilkinson & Pickett, 2009).

This study seeks to measure positive and negative aspects of empathy in educators in regard to their own socioeconomic backgrounds.

### **Data Collection Methods Used**

A 43-item survey was taken by 529 educators in the Omaha Public Schools District and Millard Public Schools District over the days of 10/11-10/12/2015. 372 classroom teachers, 28 administrators and 129 certified teachers who identified themselves as working in an area of “Other” participated. Educators who had come from low-income families during the majority of their k12 education experience were sought as the key demographic for the study, of the 529 educators studied, 146 came from low-income families. The remainder of the sample came from middle (355) and high (28) income families during the majority of their k12 education experience.

The survey contained a measurement of empathy based upon the Toronto Empathy Assessment (Spreng, McKinnon, Mar & Levine, 2009), a 31- question assessment resulting in an objective score on a unidimensional scale of empathy composed of multiple measures, measuring empathy in adults without brain damage. Its quotient is composed of multiple assessments (Hogan, 1969; Mehrabian & Epstein, 1972; Hashimoto & Shiomi, 2002; Spreng, McKinnon, Mar & Levine, 2009) from the past 46 years of objective measurements of empathy. The scores do not correlate to any scale or measure, they simply result in a given number for comparison and nothing can be surmised from the quotient except that a given number may be higher or lower than another.

Overall, the survey proved to find no significant differences in empathy quotients between teacher income backgrounds, beliefs regarding student efficacy based on those income backgrounds. However, there was significant difference between educators who came from Low-income backgrounds during their k12 education experience and educators who came from Middle-income backgrounds in the areas of stereotyping and inversely-correlated empathy toward students from similar backgrounds.

Further analysis of the data showed a significant drop in empathy in teachers after their 3-5<sup>th</sup> year of teachers that was later regained (see Appendix C).

## **Exploratory Research Questions and Findings**

50.21

***1. Do educators who come from low-income backgrounds demonstrate different quotients of empathy than educators from middle to high income backgrounds?***

While self-reported income levels resulted in different empathy quotient averages (High = 51.01, Medium = 50.30, Low = 51.22), analyses of variance showed no significant difference between teacher background and empathy quotient between groups.

***a. Is there a possible correlation between educator background and beliefs of efficacy toward students from low-income families?***

There was no significant difference between teacher background and beliefs of efficacy toward students from low-income families.

***b. Is there a possible correlation between educator background and beliefs of efficacy toward students from middle-high income families?***

There was no significant difference between educator background and beliefs of efficacy toward students from middle-high income families and no correlation existing between any of the survey items in these categories.

***c. Do educators from low or middle to high-income backgrounds show a possible correlation in indifference, stereotyping or extreme views about student family income?***



There was a significant difference in responses regarding stereotypes among two of the three survey items (See Appendices A and B for relationship between items and research questions). The first item, "It is easy to spot a poor student."  $F(1,528) = 4.586$ ,  $p < .033$ ,  $r = .093$ ,  $p = \leq .005$ , showed a significant differences between educators from Low and Middle-income families during their k12 education experience with educators from low-income families rating themselves higher.

The second item, "honestly, you can tell which kids are affluent by their appearance and how they speak"  $F(1,528) = 6.062$ ,  $p < .014$ ,  $r = .107$ ,  $p = \leq .005$ , showed significant differences between educators from Low and Middle-income families during their k12 education experience with educators from low-income families rating themselves higher.

**d. Do teachers from low or middle to high-income backgrounds demonstrate a possible inverse correlation to students from similar backgrounds regarding empathy?**

There was a significant difference in "I identify with the students I challenge the most",  $F(1,490) = 6.876$ ,  $p < .009$ ,  $r = .112$ ,  $p = \leq .005$  between educators from Low and Middle-Income families during their k12 education experience with educations from Low-income families rating themselves higher.

**Conclusion**

The only question that demonstrated significance among *income* groups for educators was, “I can tell when others are sad even when they do not say anything.” This item showed a high amount of significance between educators who came from Low and High-Income families during their k12 education experience,  $F(1,170) = 7.508$ ,  $p < .034$ , with educators from Low-income families rating themselves higher in this question. Otherwise, the differences in stereotyping and background similarity seemed to exist between educators from only Low and Middle-income families.

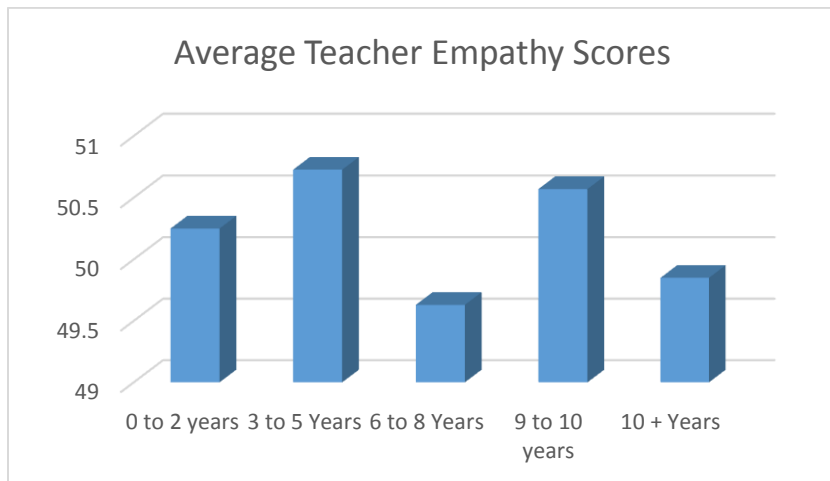
In addition to this, Educators from Low-Income families had the lowest empathy quotients on average (6.5), while Educators from Middle-income families had the highest empathy quotients on average (6.9). This difference in average score implies that the significance of the variances found in stereotyping and background similarity are stronger than they might appear. In fact, the survey Item, “I can tell when others are sad even when they do not say anything.” Originates from an empathy assessment (Hornak, Rolls & Wade, 1996) designed to assess the ability for subjects to interpret behavioral versus subjective emotional change (body language). One assumption that could be taken away from the survey is that educators from Low-income families may stereotype students based upon their assumptions. They may also seek to specifically challenge students whom they identify as similar to themselves in socioeconomic status during their own educational experience.

Conversely, educators from middle-income backgrounds may be more empathetic to the students they work with overall, and not seek to challenge students who come from a background that is similar to theirs; most likely because nationally, 48% of the students in public school classrooms currently come from low-income families and

these educators are more-than-likely focusing their efforts on the needs of students from low-income families. These same educators are also probably less likely to make stereotypical assumptions because their own social experiences may not have shaped their world view of socioeconomic status in the same way an educator from a Low-income family may have.

One of the most interesting things to come from the data appeared nothing to have little or nothing to do with socioeconomics. When career-length was analyzed in 3-year parts and compared against empathy quotients, a pattern emerged that showed a marked drop in empathy just after the 5<sup>th</sup> year.

Table 1: Years of Teaching and Empathy Quotient



Further analysis found this pattern to exist among each group (classroom, administrators and “other” see Appendix C for break-out).

The overall choice of methodology utilizing ANOVAs and correlations proved to be limiting after the responses were coded because this created a problem when running post-hoc analyses and also created a sort of “shotgun” approach to data analysis that only showed me the highest areas of significance and didn’t reveal more subtle patterns in the data that would have come from factor analysis. While there were 500+ respondents, since there were multiple categories for years of teaching and three categories for type of teacher, there were not enough responses for post-hoc analysis. So, choosing to use ANOVAs was the equivalent of looking at the stars through a low-power telescope when there was enough data to see twice as far with a different methodological (and less time-intensive) approach. I found my way around the problems of post-hoc analysis by re-coding the data for income into categories of Low vs Middle, Low vs High, Low vs Middle and High; this allowed me to reverse the direction of the independent/dependent variable in the ANOVA test and unmask which variable was significant between groups without much effort. Coincidentally, this is what brought me to do the same thing with the variable of career length, which was a happy accident.

Other than my choice of methodology, I was limited in other ways: The survey was sent out to 4,300 potential respondents, 900 in Millard and 3,400 in OPS. The response rate was only 12.3%, because late at night on the second open day of the survey, I was contacted by OPS and was asked to close the survey. I was told that there was a review process that I needed to go through before surveying OPS teachers. At that point I closed my survey, having enough educators from low-income backgrounds in my sample to conduct the study. Also, teachers self-identified as coming from “Low”, “Middle” or “High” income backgrounds. It is difficult to objectively determine if these categories are

accurate based upon self-identification. Compounding this is that “Low”, “Middle” or “High” incomes are subjective descriptions.

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### Appendix A: Survey as Distributed

Are you a classroom teacher, administrator or other?
How many years have you been teaching?
What was your family income as a child during the majority of your own k-12 school experience?
Male or Female?
Race/Ethnicity?
Zip Code?
A kid who comes from a middle to high-income family is likely to go to college.
Children that are poor are likely to achieve in the classroom.
High-income families produce kids that are likely to achieve well on standardized tests.
Honestly, you can tell which kids are affluent by their appearance and how they speak.
I am hardest on the students who were like me when I was a kid.
I am not really interested in how other people feel.
I become irritated when someone cries.
I believe poor people have the ability to become rich if they want to.
I can spot a rich student.
I can tell when others are sad even when they do not say anything.
I do not feel sympathy for people who cause their own serious illnesses.
I don't feel that income has anything to do with achievement.
I don't have sympathy for parents who aren't working.
I don't treat rich or poor students differently.



I enjoy making other people feel better.
I find it silly for people to cry out of happiness.
I find that I am "in tune" with other people's moods.
I get a strong urge to help when I see someone who is upset.
I have tender, concerned feelings for people less fortunate than me.
I identify with the students I challenge the most
I remain unaffected when someone close to me is happy.
I show the least pity to the students I see myself in.
If I know a student hasn't eaten that day I might cut them some slack on a test.
In the grand scheme of things, rich people just work harder.
It is easy to spot a poor student.
It upsets me to have many poor students at my school.
It upsets me to see someone being treated disrespectfully.
Kids from poor families are likely to go to college.
Money has nothing at all to do with how well you do in school.
Most families with higher incomes produce kids that are likely to achieve in the classroom.
Other people's misfortunes do not disturb me a great deal.
Poor families produce kids that are likely to achieve well on standardized tests.
When a friend starts to talk about his\her problems, I try to steer the conversation towards something else.
When I encounter a student who I suspect has no food at home, I treat them no differently than other students.

When I see someone being taken advantage of, I feel protective towards him\her.
---

When I see someone being treated unfairly, I do not get involved.
---

When someone else is feeling excited, I tend to get excited too.
--

## APPENDIX C: Institutional Approval



NEBRASKA'S HEALTH SCIENCE CENTER

Office of Regulatory Affairs (ORA)  
Institutional Review Board (IRB)

April 6, 2017

Joshua Jessen, Ed.D., ABD  
Education  
UNO - VIA COURIER**IRB # 195-17-EX****TITLE OF PROPOSAL:** Empathy: Do Levels Vary by Years of Service?

The Office of Regulatory Affairs (ORA) has reviewed your application for *Exempt Educational, Behavioral, and Social Science Research* on the above-titled research project. According to the information provided, this project is exempt under 45 CFR 46:101b, category 2. You are therefore authorized to begin the research.

It is understood this project will be conducted in full accordance with all applicable HRPP Policies. It is also understood that the ORA will be immediately notified of any proposed changes for your research project.

Please be advised that this research has a maximum **approval period of 5 years** from the original date of approval and release.

If the research is completed prior to 5 years, please notify the Office of Regulatory Affairs at [irbora@unmc.edu](mailto:irbora@unmc.edu). If this study continues beyond the five year approval period, the project must be resubmitted in order to maintain an active approval status.

Sincerely,

Signed on: 2017-04-06 16:37:00.000

Gail Kotulak, BS, CIP  
IRB Administrator III  
Office of Regulatory Affairs

## APPENDIX D: Email Letter

Dear Participant,

I invite you to participate in a research study entitled *Empathy: Do Levels Vary by Years of Service?* **IRB # 195-17-EX**. I am a doctoral candidate in the Educational Leadership Program at the University of Nebraska - Omaha and am in the process of completing research for my doctoral dissertation. The purpose of the research is to determine best practices for teacher professional development. The enclosed survey has been designed to collect information on empathy.

Your participation in this research project is completely voluntary. You may decline altogether, or leave blank any questions you don't wish to answer. However, I would ask that you complete all the questions in the survey so that I can use the data in my research. There are no known risks to participation beyond those encountered in everyday life. Your responses will remain confidential and anonymous. Data from this research will be kept under lock and key and reported only as a collective combined total. No one other than the researchers will know your individual answers to this survey.

If you agree to participate in this project, please answer the questions on the survey as best you can. It should take approximately 5 minutes to complete.

If you have any questions about this project, feel free to contact Josh Jessen at [jjessen@unomaha.edu](mailto:jjessen@unomaha.edu).

Thank you so much for your assistance in this important endeavor.

Sincerely,

Josh Jessen