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WHAT ARE THE MOST EFFECTIVE COMPONENTS OF EMPATHY EDUCATION FOR UNDERGRADUATE STUDENTS TO INCREASE THEIR EMPATHY LEVELS?

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Mary Kate Berardi

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The dissertation of Mary Kate Berardi has been reviewed and approved by the following:

Mark A. Brennan
UNESCO Chair for Community, Leadership, and Youth Development
Professor of Leadership and Community Development
Dissertation Adviser
Chair of Committee

John C. Ewing
Associate Professor of Agricultural and Extension Education

Matthew Kaplan
Professor, Intergenerational Programs and Aging

Lucy R. McClain
Science and Education Program Director, Shaver's Creek Environmental Center
Assistant Teaching Professor in Recreation, Parks, and Tourism Management

Pat Dolan
UNESCO Chair in Children, Youth and Civic Engagement
Professor, National University of Ireland, Galway
Special Member

ABSTRACT

Half of the world's seven billion human inhabitants are under the age of 30 (Boumphrey, 2012). With so many young people poised to run the world's governments and businesses, the need to bolster support of and for the youth population grows with every new birth. As the numbers increase, so do the opportunities to forge connections in the increasingly global marketplace. Building the necessary social connections with others who may not share inherent values requires empathy (Davis, 1983 and Ferrant et al., 2011). Empathy is a life skill that should be taught alongside the core subjects of reading, writing, math, and science. From the time of birth, humans look to understand the emotions of others. Learning to show empathy toward others leads to prosocial behaviors that benefit both individuals and society. Empathy is not just about being kind to one another. Showing empathy to others is not only positive to the receiver of empathy, but also benefits the empathizer. People who are empathetic are higher academic achievers and adjust better socially when compared to their peers.

While empathy is considered an inherent trait, many scientific studies reveal that it can also be taught and refined by schooling and life situations (Ferrant et al., 2011). Using these lines of thought, Penn State researchers, in partnership with the National University of Ireland (NUI), Galway and UNESCO, developed a curriculum, called *Activating Empathy for Undergraduate College Students*, designed to teach empathy to students ranging in age from 18 to 25, with the intent of heightening the students' abilities to empathize with those unlike themselves. The *Activating Empathy* curriculum includes a 12-hour core module that can be modified to meet the needs of a variety of audiences. The basic module includes topic such as the definition of empathy, conflict resolution, the psychology of empathy, listening skills, and mindfulness exercises. Using Kolb's model for experiential learning, the lessons include opportunities for abstract conceptualization, active experimentation, concrete experience, and reflective observation (Kolb, 1984).

The findings of this research indicate that emphasis on four components in an empathy education course for undergraduate students will increase their empathy levels. These areas are (1) the ability to perceive typical emotions in a situation; (2) the ability to respond appropriately to someone else's emotions; (3) the ability to understand emotions in an interaction; and (4) the ability to separate one's emotions from another's emotions. Suggestions for how to incorporate these components into empathy education and everyday education are discussed.

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CHAPTER I

INTRODUCTION

In today's modern cultures, humans are taught that competition and self-interest are what will lead to success (Krznaric, 2015, p.32). Yet researchers in empathy and social activism argue human brains are hardwired for social interactions and connections with others (Coplan, 2011; Howe, 2013; Krznaric, 2015). Empathy is a life skill that should be taught alongside the core subjects of reading, writing, math, and science. Learning to show empathy toward others leads to prosocial behaviors that benefit both individuals and society. And empathy is more than simply being kind to someone else.

As early as during infancy, humans can recognize and begin to mimic another's emotions, showing they seek to understand other human beings (Bråten, 2013). When people are taught empathy through a variety of methods, they emerge as happier individuals with more prosocial behaviors that are better for the greater good (Barry et al., 2013; Howe, 2013; Krznaric, 2015; Sklad et al., 2012; Weare & Nind, 2011; Zins et al., 2004). Being part of positive social interactions, or prosocial behaviors such as being empathetic, have been linked to successes academically and socially (Caprara et al., 2000; Catalano et al., 2004; Durlak et al., 2011; Durlak et al., 2010; Feshbach & Feshbach, 2009; Payton et al., 2008; Zins et al., 2004; Wentzel, 1993).

Young people under the age of 25 make up 42% of the global population, making this demographic a vital group to train as future leaders of the world (Khokhar, 2017). The study presented in this paper explored a program designed to teach empathy to this target demographic of young adults between the ages of 18 and 25. Specifically, the study explored

which factors that build the concept of empathy should be taught in an empathy education course to increase participant empathy levels.

STATEMENT OF PROBLEM AND IMPORTANCE OF STUDY

Increases in empathy training would help the world come together to address large issues such as "climate change, poverty, escalating violence, international conflicts, [or] illness" (Erlich & Ornstein, 2012). Research indicates that the social and developmental experiences that occur early in life can set the stage for citizenship and responsibility across the lifespan (Erlich & Ornstein, 2012; Hope & Jagers, 2014; Wray-Lake & Syvertsen, 2011). As such, this study addressed a lack of empathy programs for young adults in this critical stage of development. It sought to determine the most effective ways to train this young adult population (aged 18 to 25), in empathy. Specifically, the study looked at an empathy program designed for university students and determined which factors of the empathy program are the most effective in increasing the students' empathy levels.

For this study, several factors were examined to determine their influence on empathy via a curriculum called *Activating Empathy for Undergraduate College Students (AEUGS).* The first is the demographics of study participants, including age, gender, and race. In a systematic review of studies into the expression of empathy based on a variety of factors, Silke et al. (2019) found that the majority of studies in the expression of empathy in youth showed that females were more willing to express empathy than males. This same review of studies revealed that there is variety in expression of empathy across cultures and ethnic identities (Silke et al., 2019). As for age, Beadle and de la Vega (2019) found that older adults have lower cognitive empathy (i.e., the ability to understand others' thoughts and feelings)

than younger adults, yet similar, and in some cases even higher, levels of emotional empathy (i.e., the ability to feel emotions that are similar to others' or feel compassion for them). This is due to a decrease in the function of the part of the brain that allows for cognitive empathy as one ages (Beadle & de la Vega, 2019).

In addition to demographics, four literature-defined dimensions of the concept of empathy were explored in this study for their effects on the empathy levels of participants. These dimensions include:

1. The ability to define empathy;
2. the ability to perceive another's emotions;
3. the ability to understand another's emotions during an interaction; and
4. the ability to feel what another is feeling while differentiating self from others.

The *AEUGS* curriculum, the tool through which empathy will be examined in this study, was designed with these four dimensions of empathy in mind.

The first of these dimensions is the ability to define empathy. Empathy is a complex topic with multiple layers that reaches into a variety of disciplines. Having a basic understanding of empathy, and how it is different from similar terms such as compassion or feelings, allows for a person to act in truly empathetic ways. The second of these dimensions is the ability to perceive another's inner emotions. This is generally considered to be involuntary in healthy human development (Batson et al., 1997; Bråten, 2013; Coplan, 2011; Kohut, 1982; Levenson & Ruef, 1992). The third dimension is the ability to understand another's inner emotions during an interaction. Research shows this dimension can be cultivated over time if someone desires to do so (Coplan, 2011; Decety & Moriguichi, 2007; Hoffman, 1984; Kohut, 1982). The fourth dimension is the ability to feel what another is

feeling while differentiating self from others (Coplan, 2011; Decety & Moriguichi, 2007). When empathizing, it is important to understand what someone else is feeling is not always the same as one own's emotions. These four literature-supported dimensions of empathy combined to form the overarching conceptualized definition of empathy used throughout this study.

Increasing empathy skills during this time of development is associated with a wide range of personal, academic, and social development skills that can assist in a lifetime of achievements, such as better quality peer relationships, higher academic achievement, and greater social competence (Caprara et al., 2000; Dekovic & Gerris, 1994; Eisenberg et al., 2006; Saarni, 1990; Wentzel, 1993). Currently, existing empathy education interventions are designed for people outside of the general youth and young adult population. Some educators, such as Levine (2009) and Feshbach and Feshbach (2009), have suggested methods to increase empathy in K through 12 schools. These methods involve supplying adults with the tools to promote empathy in children, through music, activities, and leading by example (Feshbach & Feshbach, 2009; Levine, 2009). Some empathy interventions exist for adult educators to help their students in uncomfortable social situations (Feshbach & Feshbach, 2009; Hicks et al., 2016; Palladino et al., 2016). The study in this paper intends to determine what factors of an empathy program are the most effective in increasing empathy levels in young adult participants, allowing for the creation of effective empathy training programs. Knowing which factors increase empathy levels the most will help future researchers and educators determine the most effective ways to develop empathy centered programs.

AUDIENCES FOR THIS STUDY

There are five main audiences that will be interested in this research study. These audiences are as follows, in no particular order: (1) academic institutions, particularly ones with undergraduate education, (2) non-formal learning organizations, such as youth groups and workplaces, (3) other researchers, particularly ones in the field of socio-emotional learning and education, (4) UNESCO and other Intergovernmental Organizations, and (5) Non-Governmental Organizations (NGOs).

This study is taking place at Penn State. Depending on the results of the study, the *AEUGS* program could be a valuable tool for academic institutions to use with their students to increase empathy levels. Increased levels of empathy have been linked to prosocial behaviors such as:

- better quality peer relationships (Dekovic & Gerris, 1994; Eisenberg et al., 2006)
- greater academic achievement (Caprara et al., 2000; Wentzel, 1993)
- greater social competence (Saarni, 1990)
- less prejudice (Dovidio et al., 2000; Galinsky & Ku, 2004);
- fewer externalizing behaviors (Kokko & Pulkkinen, 2000)
- lower aggression (Miller & Eisenberg, 1988; Pulkkinen & Tremblay, 1992; Raskauskas et al., 2010)
- lower engagement in antisocial behavior (Barr & Higgins-D Alessandro, 2009)

The mission of the United States' Department of Education is to, "promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access" (Mission, 2020). If academic institutions in the United States want to remain competitive in the globalized world, they need to consider empathy as a way to

building the necessary social connections with others who may not share inherent values (Davis, 1983; Ferrant et al., 2011). Learning the core subjects of reading, writing, math, and science are only one part of an education. Producing adults who have critical thinking skills and socioemotional tools for interacting in a globalized world would help the United States remain a key player in world events (Krznaric, 2015; Nguyen et al., 2019). While core academics are important, academic institutions need to consider the bigger picture of the well-rounded education of their students in order to prepare them for their role as adults who can successfully address timely social issues occurring in their communities and beyond.

In addition to formal academic institutions, a second group that would be interested in the results of this study are non-formal learning organizations such as youth groups and workplaces. Youth organizations 4-H, the FFA, scouting groups, and Boys and Girls Clubs of America strive to promote leadership in young adults and could benefit from developing empathetic leaders. Workplaces are rich with the opportunity to promote empathy. Building the necessary social connections with others who may not share inherent values requires empathy (Davis, 1983; Ferrant et al., 2011). Increasing empathy among coworker interactions and employee/employer interactions would create a more productive, more felicitous workplace.

A third audience that would be interested in the results of this study would be researchers, particularly ones in the fields of socio-emotional learning and education. The results of this study could lead to opportunities to expand on the curriculum content, creating ways to teach empathy through a variety of academic subjects. The results will also open the door to more study possibilities with a variety of populations with different demographics. Based on the literature review at the time of this study (2019-2020), there is no

other curriculum designed like this one, which brings young adult students together for a short, immersive experience to help them self-define empathy and then act on that empathy. While many curricula exist for elementary age students, and some for middle school aged students, there are few if any curricula designed to teach empathy to high school students or beyond. Other researchers in education may be interested in the results and pick up on them to continue research in this field.

The fourth audience that will likely be interested in the results of this study is the United Nations Educational, Scientific and Cultural Organization (UNESCO) and its associated partners. From UNESCO's website, part of the UNESCO vision is to "develop educational tools to help people live as global citizens free of hate and intolerance" (UNESCO, 2019). UNESCO would want to share *AEUGS* around the world for others to use. It could be ideal to provide this education tool to those seeking to increase empathy levels in young adults, who are poised to lead the world in the near future.

Finally, a fifth audience that would be interested in the results of this study would be non-governmental organizations, or NGOs. Some of these groups may in fact be organizations that are already working in the field of empathy, such as Harvard's Making Caring Common, Hasbro's Be Fearless, Be Kind, and The Roots of Empathy Project. These organizations focus on younger children and elementary schools. Perhaps if given the opportunity to work with a program that addresses the needs of older groups, they would be interested in being partners to continue this work

OVERVIEW OF THEORETICAL FRAMEWORK

In Chapter 3, the theories that frame this study will be discussed in more detail. These theories include Maslow's Hierarchy of Needs, Kolb's Experiential Learning Model, and a conceptual map of empathy that was used to design the *AEUGS* curriculum. The theories also guided the study of the variables, allowing for ease in measuring a multi-layered topic such as empathy.

OVERVIEW OF STUDY METHODOLOGY

Research Questions and Objective

The objective of this research study was to discover what factors of a program entitled *Activating Empathy for Undergraduate College Students (AEUGS)* affect empathy levels of participants.

Using a pre-test, treatment, post-test model, the program was delivered and the effects of components of the program were evaluated to determine which had the most significant impact on participant empathy levels.

The following research questions guided the study:

- RQ1: How do demographics such as age, gender, and race affect the empathy levels of participants before and after completing the AEUGS program?
- RQ2: What is the relationship between the ability to define empathy and empathy levels?
- RQ3: What is the relationship between the ability to perceive someone else's emotions and empathy levels?
- RQ4: What is the relationship between the ability to understand someone's

emotions during and interaction and empathy levels?

- RQ5: What is the relationship between the ability to differentiate another's emotions from oneself and empathy levels?

Research Methods

To explore these research questions, a mixed-method study was conducted throughout the Spring of 2019 and the Fall of 2019 to determine which factors have the most significant influence on empathy in participants. A convenience sample of 92 participants was recruited from undergraduate students across Penn State University, then given a pre-test to determine baseline empathy levels. Participants completed an in-person *Activating Empathy for Undergraduate College Students* training course and then completed a post-test to again determine empathy levels. Participants were also interviewed in focus groups to gather additional qualitative data. All quantitative data were analyzed using SPSS looking at variate and multivariate relationships, and then augmented with the collected qualitative data

DESCRIPTION OF FUTURE CHAPTERS

Five more chapters follow. Chapter II is a comprehensive review of the literature on empathy and empathy education. Chapter III discusses the conceptualized definition of empathy used in this study, as well as theories behind empathy education. In Chapter IV, the topics discussed include the research design and specific details of how the study was conducted. The remaining chapters focus on the actual research conducted for this study. The research results are provided in Chapter V, followed by an interpretation of the findings and suggestions for future studies in Chapter VI.

CHAPTER II

LITERATURE REVIEW

INTRODUCTION

As Freudian-trained psychoanalyst Theodor Reik (1948) once said, "the word empathy sometimes means one thing, sometimes means another, until now it does not mean anything" (p.357). In this single statement, he demonstrates how the term and concept of empathy has undergone many evolutions. As such, research into the definition and concept of empathy spans a variety of fields, including but not limited to psychology, sociology, neurology, primatology, medicine, education, and other social sciences.

In today's modern Western cultures, humans are taught that competition and self-interest are what will lead to success. Children are raised on school competitions and praised for academic achievements over their friends. Workplaces provide employees with monetary incentives designed to foster competition. On the contrary, however, researchers in empathy and social activism argue human brains are hardwired for social interactions and connections with others (Coplan, 2011; Howe, 2013; Krznaric, 2015; Lamm et al., 2007). As early as during infancy, humans can recognize and begin to mimic another's emotions, showing they seek to understand other human beings (Bråten, 2013). Being part of positive social interactions, or prosocial behaviors, such as being taught empathy, have been linked to children's successes academically (Caprara et al., 2000; Catalano et al., 2004; Durlak et al., 2010; Durlak et al., 2011; Feshbach & Feshbach, 2009; Payton et al., 2008; Wentzel, 1993; Zins et al., 2004). While competition, or setting one against another, is currently seen as the driving force of success, emerging research reveals that when children are taught empathy through a variety of

methods, they develop as happier individuals with an ingrained aptitude for prosocial behaviors that are better for the greater good (Barry et al., 2013; Howe, 2013; Krznaric, 2015; Sklad et al., 2012; Weare & Nind, 2011; Zins et al., 2004).

Why would people want to learn to be more empathetic? Barack Obama (2006) explained it well:

> You know, there's a lot of talk in this country about the federal deficit. But I think we should talk more about our empathy deficit - the ability to put ourselves in someone else's shoes; to see the world through the eyes of those who are different from us - the child who's hungry, the steelworker who's been laid-off, the family who lost the entire life they built together when the storm came to town. When you think like this - when you choose to broaden your ambit of concern and empathize with the plight of others, whether they are close friends or distant strangers - it becomes harder not to act; harder not to help.

HISTORY AND DEFINITIONS OF EMPATHY

Attributed to the poet, Homer, and written in the latter part of the 8th century B.C.E., *The Odyssey* contains what is considered to be one of the first recorded examples of empathy in Western literature. In chapter XVIII of the epic novel, Ulysses' son Telemachus speaks the words, "Yet, taught by time, my heart has learn'd to glow/For others' good, and melt at others' woe" (Homer, 2014/8th century B.C.E.). This phrase captures the Greek term *empatheia,* which directly translates to "physical affection or passion." Components of the word include "*em,*" which is "in," and "*pathos,"* which means "feeling" (Harper, 2019). Thus, the Greeks

established a first look at the concept of empathy and described it as “feeling into” or “physical passion” for an object or person (Harper, 2019). While there was some understanding that *empatheia* applied to other people and animals as well as objects, the focus of these early empathy philosophers was projecting human feelings into inanimate objects (Harper, 2019).

From these Greek roots, the German term *Einfühlung* was developed in 1858 from *ein* "in" and *Fühlung* "feeling" by Vischer (1873) and Lipps (1903, 1906). The German word persisted with the idea of feeling into an object or trying to project what something outside of oneself might be feeling (Ganczarek et al., 2018). It was not until around 1910 that the English term “empathy” was born (Coplan, 2011). Edward Titchener combined the translations of the Greek and German terms to create the English word “empathy.” Titchener defined empathy as “the name given to that process of humanizing objects, of reading or feeling ourselves into them” (Titchener, 1910, p.512: Footnotes). Notice he did not mention that one could also feel into other people. As with the earlier terms, Titchener’s focus was on inanimate objects, with little consideration being given to applying empathy to other humans (Titchener, 1910).

In the early 1900s, inspired by Titchener’s new term, psychologists and philosophers began to explore empathy as it concerns understanding the emotions of others. Today, the concept of empathy has evolved to include many dimensions and parts, bridging the fields of psychology, sociology, neurology, primatology, medicine, education, and others. Simply stated, empathy is the ability to “put oneself in another’s shoes,” feeling what they are feeling and understanding why they are feeling it, while still understanding their emotions may not be one’s own. In an essay entitled “Some Thoughts on Empathy,” Columbia University psychiatrist Alberta Szalita emphasized that...“[empathy is] consideration of another person’s feelings and readiness to respond to his [or her] needs … without making his [or her] burden

one's own." (Hardee, 2003). In addition to the definition of empathy, the reasons why one should practice empathy are essential to review.

DIFFERENCES BETWEEN EMPATHY, SYMPATHY, COMPASSION, AND MINDFULNESS

Often the terms empathy, sympathy, compassion, and mindfulness are used interchangeably. While all are important, and can even be related, each is a specific individual concept. Their differences should be recognized to gain a better understanding.

Sympathy and empathy are very often interchanged as similar concepts. The difference between empathy and sympathy is that when one empathizes, they are physically feeling the same emotion as another person (Krznaric, 2015). For example, if someone is grieving because they lost someone they love, empathy would mean feeling this grief and perhaps even crying alongside them. In comparison, sympathizing with someone who is grieving from a loss would mean feeling a different emotion from them, such as pity. Empathy is an emotional response that is shared, and sympathy is an emotional response that is not shared (Krznaric, 2015).

Compassion and empathy are also often interchanged as similar concepts. Compassion is more closely related to sympathy. Compassion comes from the Latin word *pati*, which means "to suffer" (Merriam-Webster, 2020) When experiencing compassion, a person can recognize and maybe even feel the emotions another is feeling (Krznaric, 2015). When a person is empathizing, however, they take the process a step further and become one with the person's emotions (Krznaric, 2015). The difference here is subtle, but empathy is best described as a more in-depth version of compassion.

A final term that is often interchanged with empathy is mindfulness. Mindfulness is a therapeutic technique that helps focus one's awareness of the present moment, helping to acknowledge one's feelings, thoughts, and physical presence (Langer, 1989). In this way, mindfulness can be a tool to help separate one's own emotions from another's emotions, an important component of the act of empathy, and mindfulness can help prevent empathy burnout (Walsh, 2010). Practicing mindfulness, however, does not mean one is being empathetic, but mindfulness is a tool that can enhance empathy.

WHY EMPATHY MATTERS

Mistakenly, empathy is often seen simply as providing comfort to someone who needs it. Empathy is greater than this, and the ability to empathize has concrete and research-backed impacts on society and individuals. A review of multiple empirical studies connecting empathy and prosocial behaviors, conducted by Eisenburg and Miller (1987), showed that "empathy relates positively to prosocial behavior" (p.110). Krevans and Gibbs (1996) surveyed 78 sixth and seventh graders to find that "more empathic children were more prosocial" (p.3263). In a publication from 2016, Lin and DeSteno compared results from two studies designed to determine if empathy levels increase with adversity. Both of these studies recognized that "individuals who have experienced adversity attest to increased tendencies both to perspective-take and to place a value on the welfare of others in need" (p.180). In other words, they discovered that individuals who experience adverse situations for themselves could better understand the situation or show empathy for others in that situation. Additionally, these participants have an increased desire to help when others experience similar things or exhibit prosocial behaviors (Lin & DeSteno, 2016). Following this line of thought, if one can be trained

to think empathetically without going through a similar traumatic experience, then it would also lead to increased prosocial behaviors.

Another term for prosocial behavior is activated empathy, which is empathy that encourages the empathizer to take action to improve the social situation of another (Coke et al., 1978; Gano-Overway et al., 2009; Hoffman, 1977; Kohut, 1982; Pavalovich & Krahnke, 2012; Tori & Batson, 1982). Coke et al. (1978) believe that genuine empathy provokes a compassionate response to someone's distress. Empathy is shown to be central in promoting prosocial and altruistic behaviors by increasing an individual's positive, helpful, and thoughtful actions (Gano-Overway et al., 2009; Pavalovich & Krahnke, 2012). Empathy for others and its associated prosocial behaviors are vital facilitators of positive social understanding (Hoffman, 1977; Tori & Batson, 1982).

When people are given the opportunity to show empathy, it reduces stereotyping and ingroup favoritism (Barr & Higgens-D'Allessandro, 2009; Galinsky & Ku, 2004; Hope & Jagers, 2014). Galinsky and Ku (2004) found that by using empathy to work through social processes that produce bias, participants in their study were more likely to decrease their stereotypes held of others. For example, in a study completed by Hope and Jagers (2014) found that institutional discrimination prevented black youth (ages 15 to 25) from participating in civic engagement. Increasing empathetic practices to understand these barriers and other barriers created by race, gender, and other stereotypes would reduce these phenomena and thus encourage citizens to feel comfortable participating in society (Barr & Higgens-D'Allessandro, 2009; Galinsky & Ku, 2004; Hope & Jagers, 2014).

Empathy for others in a community, especially those who are different or marginalized, leads to prosocial behaviors, such as sharing, comforting, rescuing, and helping (Eisenburg &

Miller, 1987). Empathy is linked to altruism and compassion for others (Hoffman, 1977; Hoffman, 2000). This link between empathy and prosocial behaviors suggests that, if empathy could be increased, then prosocial behaviors in a community would also increase (Eisenburg & Miller, 1987). Empathy and the prosocial behaviors it encourages can be tools for community leaders to strengthen their societies. Research indicates that the social and developmental experiences that occur early in life can set the stage for citizenship and responsibility across the lifespan (Erlich & Ornstein, 2012; Hope & Jagers, 2014; Wray-Lake & Syvertsen, 2011). These examples show the impacts empathy can have at the societal level, strengthening, and building communities that are interconnected and supportive of even their most at-risk individuals (Howe, 2013).

In addition to the benefits to society, there are also benefits to the individual who demonstrates empathetic tendencies (Caprara et al., 2000; Dekovic & Gerris, 1994; Eisenberg et al., 2006; Feshbach & Feshbach, 2009; Saarni, 1990; Wentzel, 1993). More empathetic individuals show increases in a wide range of personal, academic, and social development skills that can assist in a lifetime of achievements, such as higher academic achievement and greater social competence (Caprara et al., 2000; Eisenberg et al., 2006; Feshbach & Feshbach, 2009; Saarni, 1990; Wentzel, 1993).

Empathy and its associated prosocial behaviors such as cooperating, helping, sharing, and consoling have a strong positive impact on later academic achievement, as empathy plays a critical role in educational processes (Caprara et al., 2000; Feshbach & Feshbach, 2009). Some educators advocate for empathy as part of education's core curriculum, because it boosts the pupil's interpersonal relationships and increases their academic achievement (Krznaric, 2015).

In addition to the academic benefits above, individuals who demonstrate empathy fit in better socially (Dekovic & Gerris, 1994). These individuals can read, recognize, and negotiate social situations via empathy, creating better relationships with their peers (Krznaric, 2015). Empathy minimizes aggressive behaviors and antisocial behaviors, leading to a less violent society (Feshbach & Feshbach, 1982; Miller & Eisenberg, 1988; Parke & Slaby, 1983). In the workplace, empathetic tendencies create functional environments with higher levels of organizational citizenship behavior and customer-oriented citizenship behavior, which ultimately leads to higher productivity (Nguyen et al., 2019).

Empathy enhances connectedness, which facilitates the ability to find common ground and solve common problems (Pavalovich & Krahnke, 2012). Increases in empathy lead to citizens who work to address social issues while being happier individuals with an integrated state of underlying connectedness to the world around them (Pavalovich & Krahnke, 2012; Tori & Batson, 1982). The ability to empathize goes beyond saying a kind word or smiling at a stranger, allowing for a deep caring for someone's needs that helps build healthier individuals and connected societies.

HISTORY AND REASONS FOR EMPATHY EDUCATION

Empathy education is traditionally seen as an add on to classroom learning. Education experts, however, are beginning to recognize that teaching empathy deserves to be part of the core curriculum, alongside reading and math (Krznaric, 2015). Some in the education field believe that empathy education starting at the elementary level will produce citizens who care about community issues such as poverty, war, politics, and climate change (Krznaric, 2015). Some believe that empathy training would help the world come together to address significant

issues such as “climate change, poverty, escalating violence, international conflicts, [or] illness” (Erlich & Ornstein, 2012). Research has shown that socio-emotional learning programs, such as empathy education programs, are highly successful in youth and leadership development (Payton et al., 2008). Few classroom programs dedicated to teaching solely empathy exist.

In education, research into the field of empathy is limited but growing. Usually, data used in empathy education comes from studies completed in other fields. For example, Hoffman (2000), a psychologist, completed studies and came to believe that the development of empathy progressed on a continuum and could be refined through practices such as role-playing, conditioning, and social learning offered throughout life (Gerdes et al., 2010). Some educators, such as Levine (2009) and Feshbach and Feshbach (2009), have suggested methods to increase empathy in schools. These methods involve supplying adults with the tools to promote empathy in children, through music, activities, and leading by example (Feshbach & Feshbach, 2009; Levine, 2009). Some empathy interventions exist for adult educators to help their students in uncomfortable social situations (Feshbach & Feshbach, 2009; Hicks et al., 2016; Palladino et al., 2016).

Professional development for teachers is designed to increase empathy levels in teachers, which in turn helps students achieve higher scores due to a love of schooling (Feshbach & Feshbach, 2009). This professional development includes interventions such as human relations training, interpersonal communication skills development, role-playing, discussion of moral dilemmas, lectures, and programmed materials (Feshbach & Feshbach, 2009). Again, these are not formal curricula and are not a standard part of teacher professional development but have been tested for their effectiveness with a variety of empathy assessment

techniques (Feshbach & Feshbach, 2009). Empathy education could be added to more teacher development programs to lay the foundation for empathy throughout the schools.

Anti-bullying interventions also exist in the school system, as a means to improve social interactions among students and provide educators with tools to mediate bullying behaviors. In general, these programs do not focus on identifying and increasing empathy. Generally, there are two types of bullying interventions commonly studied. The first type is aimed at training adults to intervene in bullying situations. Some researchers, such as Hicks et al. (2016), found these types of interventions did not work, and others such as Gatandeau, Vartio, Poskiparta, and Salmivalli (2016) found that these types of interventions did work. The second type of intervention is aimed at helping students recognize bullying behaviors. These studies also had mixed results, with some programs showing reduced bullying (Palladino et al., 2016), and others showing no effect on bullying behaviors unless the program lasted for multiple years (Limber et al., 2018). While bullying programs for both teachers and students reveal mixed effects, empathy has been shown to have a positive correlation with prosocial behaviors (Miller & Eisenburg, 1988). Research suggests that bullies "are not empathetic in a way that causes remorse" (Rollins, 2014). Perhaps increasing empathy in schools would be an effective way to address bullying and other less prosocial behaviors.

Some empathy education research has been looking into methods and theories for how to increase empathy in students. Educators such as Levine (2009) and Feshbach and Feshbach (2009) have suggested ways to increase empathy in schools. These methods involve supplying grown-ups with the tools to promote empathy in children, through music, activities, and leading by example (Feshbach & Feshbach, 2009; Levine, 2009).

Outside of K to 12 education, a few studies have been done on empathy education with medical students to assess if they can become more empathetic doctors with empathy training (DasGupta & Charon, 2004; DiLalla et al., 2004; Evans et al., 1993; Fine & Therrien, 1977; Henry-Tillman et al., 2002; Kramer et al., 1989; Lancaster et al., 2002; Poole, 1978; Poole & Sanson-Fischer, 1980; Sanson-Fischer et al., 2000; Shapiro et al., 2004; Shapiro & Hunt, 2003; Wilkes et al., 2002). In most of these studies, participants self-evaluated their empathy levels using qualitative and quantitative methods (Stepien & Baernstein, 2006).

In some of these studies, participants attended a course designed to teach them empathy (DasGupta & Charon, 2004; Lancaster et al., 2002; Shapiro & Hunt, 2003). In a study done by Lancaster et al. (2002), students in their first clinical year of medical school were taught empathy through literature in sixteen hours over four weeks. These students wrote responses to course questions, which were evaluated by the researchers, and increases in empathy levels were reported (Lancaster et al., 2002). In a similar study conducted by Shapiro and Hunt (2003), self-selected preclinical students completed a related literature and medicine course designed to teach empathy. The course was modified to last eight hours over four months. Participants in this study were evaluated quantitatively and qualitatively (Shapiro & Hunt, 2003). Quantitative results show a small, statistically significant change, but qualitative data showed increased empathy (Shapiro & Hunt, 2003).

Similarly, DasGupta and Charon (2004) led self-selected preclinical students through a reflective writing seminar given over six weeks. A qualitative analysis of the written course evaluations showed increased empathy levels in these students (DasGupta & Charon, 2004). Shapiro and Hunt (2003) had participants attend a theatrical performance that surrounded the theme of empathy. In this study, qualitative analysis was conducted on participant's verbal

responses and showed an increase in empathy levels for their patients. Interestingly, in all the studies mentioned above, follow up studies to check for long-term empathy attainment was not conducted (Stepien & Baernstein, 2006).

While it seems any type of empathy intervention has a positive effect on medical students, the most effective form of empathy interventions was interpersonal skills workshops and communication skills workshops. These interventions showed the highest statistically significant increases in empathy in the medical students who underwent them (Evans et al., 1993; Fine & Therrien, 1977; Kramer et al., 1989; Sanson-Fischer & Poole, 1978; Winefield & Chur-Hansen, 2000).

In addition to trying to increase empathy in the medical students, researchers have investigated methods for increasing empathy in caregivers in general. Empathy interventions have been shown to increase caregiver empathy and thereby increase the quality of life for those under someone's care (Hwang, 2015; Lamothe et al., 2018; Waring, 2012). One such study found that socio-emotional educational intervention in professional caregivers was associated with "a significant clinical signal on most measured outcomes in the domains of emotion regulation and empathy" (Lamothe et al., 2018). Hwang (2015) found that in eldercare, "caring is an interactive process...preceded by individuality and followed by well-being". Hwang demonstrated that if caregivers are concerned about their patient's individualized needs, then they are more likely to provide high-quality, personalized care (Hwang, 2017). Waring (2012) created a book intended to help geriatric professionals realize the individuality of their patients, thus treating them with dignity. Supporting caregivers to recognize seniors as humans increase the quality of care they provide (Hwang, 2015; Lamothe et al., 2018; Waring, 2012).

WHY THIS RESEARCH MATTERS

While the idea of empathy has been around for centuries, the concept and definition of the term are continually evolving. A complex human process, the study of empathy spans a variety of fields including but not limited to psychology, sociology, neurology, primatology, medicine, education, and social sciences. As such, empathy is not just an add on to the core curriculum but should be a core part of education curricula (Krznaric, 2015). More empathetic individuals show increases in a wide range of personal, academic, and social development skills that can assist in a lifetime of achievements, such as higher academic achievement and greater social competence (Caprara et al., 2000; Eisenberg et al., 2006; Feshbach & Feshbach, 2009; Saarni, 1990; Wentzel, 1993).

There are two main implications for teaching children and young adults to be empathetic, starting at an early age. The first implication is higher academic achievement and more robust schools. The second implication is stronger societies with higher-achieving individuals.

If empathy education is increased in schools, one result will be higher academic achievement (Caprara et al., 2000; Catalano et al., 2004; Durlak et al., 2010; Durlak et al., 2011; Feshbach & Feshbach, 2009; Payton et al., 2008; Wentzel, 1993; Zins et al., 2004). Student academic achievement is linked to resources provided to schools (McKenna, 2018). Schools that show higher academic performance will receive more funding, and empathy is a tool that has been shown to increase student achievement.

By increasing the frequency of empathy education programs for students, and including empathy training in professional development for teachers, society will benefit. At a minimum, schools will see fewer aggressive and antisocial behaviors (Feshbach & Feshbach,

1982; Miller & Eisenberg, 1988; Parke & Slaby, 1983). And at a more significant level, students with empathy training will emerge into the world as better leaders, producing societies with reduced racism and increased prosocial and altruistic behaviors (Gano-Overway et al., 2009; Pavalovich & Krahnke, 2012; Payton et al., 2008). Empathy training would help the societies worldwide come together to address significant issues such as "climate change, poverty, escalating violence, international conflicts, [or] illness" (Erlich & Ornstein, 2012).

THE IMPORTANCE OF THE CURRICULUM: *ACTIVATING EMPATHY FOR UNDERGRADUATE COLLEGE STUDENTS*

Activating Empathy for Undergraduate College Students is a unique curriculum and program. There are other programs designed to teach empathy, but not specifically for ages 18 to 25, and not adaptable to a wide variety of audiences. Most complete empathy curricula reach elementary and middle school-aged children, such as curriculum produced by The Roots of Empathy group and *Be Fearless, Be Kind* created by Ashoka's Start Empathy Initiative. These curricula also do not address teachers and administrators with ways to include empathetic practices in their classroom. *AEUGS* reaches an older demographic of students and educators through professional development opportunities.

Once youth head into high school and beyond, the options for empathy education drastically decrease, if not disappear completely. This is unfortunately, because this is a time of immense changes in the ability to think abstractly and be "self-reflective about identity, existence, morality, and personal relationships" (Berliner & Calfee, 1996, p.168). Between the ages of 19 and 21, research suggests that students are building pathways to link abstract concepts such as intention, responsibility, and morality (Berliner & Calfee, 1996; Blimling,

2010). Empathy is an abstract idea that fits into the building of neurological pathways around morality and relationships.

The *AEUGS* program is an evidence-based, hands-on toolkit that anyone can use to teach empathetic practices to people aged 18 to 25 years old. Other programs like this do not exist or are not designed to reach young adults who are at a critical age for abstract neurological development. That is what makes *AEUGS* unique and is what will draw different audiences to this research study. This study helped determine the most effective parts of the curriculum, so that others can build on those components and successfully reach this often neglected audience.

CONCLUSION

Empathy is a tool that can change the world. Using empathy education to produce altruistic, more compassionate citizens that are higher achieving will help societies combat societal issues. A unique curriculum like *AEUGS* has the potential to be a tool to reach a previously overlooked audience of young adults aged 18 to 25, that could be influenced to make needed community changes. The next chapter will discuss the theories used to frame *AEUGS* and this research into what makes an effective empathy education program for teaching young adults to increase their empathy.

CHAPTER III

AN ANALYSIS OF THEORY

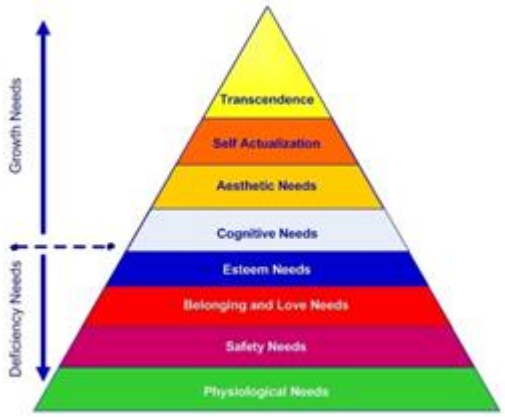
INTRODUCTION

Two main theories and a researcher designed conceptual model framed this work on empathy education. The first was Maslow's Hierarchy of Needs, which provides a vision of how empathy can help someone to reach the upper levels of the hierarchy, which include self-actualization and self-transcendence. The second theory was Kolb's Experiential Learning Model, which provided a framework for the structure of the *Activating Empathy for Undergraduate Students (AEUGS)* curriculum. Finally, the researcher designed conceptual model that framed this study will be discussed.

MASLOW'S HEIRARCHY OF NEEDS

Maslow (1943) developed his hierarchy as a theory for human motivation. The hierarchy consists of eight levels, often shown within a pyramid (see Figure 3.1 below). The needs lower down on the pyramid are called deficiency needs, and must be met before upper-level needs, or growth needs, can be reached (Mcleod, 2020). In other words, if someone starts at the base of the pyramid, or has physiological needs such as food and shelter, these needs must be met before the person can move up to any future levels. Each level does not have to be achieved 100% before a person can be motivated to move up in a level, but it must be satisfied to whatever extent is necessary for that person (Mcleod, 2020).

Figure 3.1 Maslow's Hierarchy of Needs (Mcleod, 2020)



An analysis of Maslow's Hierarchy of Needs provides an example of how empathy can be applied to help someone reach self-actualization and self-transcendence. The upper levels of self-actualization and self-transcendence lead to a refined world view that cause empathetic responses to others. As one grows through the hierarchy, one's ego also matures. With the ego maturation process, the ability to appreciate other viewpoints, or empathize with others, also develops (Pavlovich & Krahnke, 2014). As an individual moves into the growth needs levels, they begin to see beyond themselves and look for a connection to others, especially if they have experienced similar situations, leading to motivation for altruism (Koltko-Rivera, 2006; Pavlovich & Krahnke, 2014). In this way, a person who has reached self-actualization or self-transcendence can behave more empathetically than someone lower in the hierarchy of needs (Koltko-Rivera, 2006; Pavlovich & Krahnke, 2014).

As this prior research shows, increases in empathy occur as a person moves through the hierarchy of needs. In a successful empathy education program that allows participants maturation in their empathy journey, participants would be helped on their growth to self-actualization and self-transcendence, which in turn would increase their empathetic responses.

Not only would they recognize the need to help others who are lower in the hierarchy, but they would also increase their own empathy as they grow and mature.

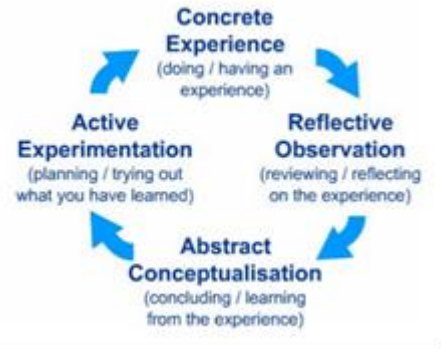
KOLB'S EXPERIENTIAL LEARNING MODEL

Kolb's Experiential Learning Model (2014) had a strong influence on the development of the *AEUGS* program. Kolb's model emphasizes experiential learning, a method seen as necessary when trying to conceptualize and experience a multi-layered topic such as empathy. Kolb developed his cyclical model on experiential learning based on the work of John Dewey (Cassidy, 2004). In this model, learning is seen as a continuous and interactive process within the cycle, in that an individual learner never stops completing the cycle (Cassidy, 2004). According to Cassidy (2004):

> The four stages of the Experiential Learning Model are described as: concrete experience (CE; experiencing) which favors experiential learning; abstract conceptualization (AC; thinking) where there is a preference for conceptual and analytical thinking to achieve understanding; active experimentation (AE; doing) involving active trial-and-error learning; and reflective observation (RO; reflecting) where extensive consideration is given to the task and potential solutions before there is any attempt at action. (pp. 430-431)

Kolb's cyclical model of learning combines experiences (doing), reflection (observing), conceptualization (thinking), and experimentation (planning) (David, 2007). A learner might prefer one stage of the cycle and stay there, which is acceptable in the learner-driven model (Cassidy, 2004).

Figure 3.2 Kolb's Experiential Learning Model (McLeod, 2013)



Two additional notes of relevance about Kolb's Experiential Learning Model include the notion that experiential learning can occur without a teacher and that experiential learning requires learners to be self-motivated (Itin, 1999; Moon, 2004). Both notions were considered when writing *AEUGS*. The learner must be involved in the learning experience to get the most out of it. Thus, the teacher can guide the experience, but it is the learner who must be invested in order to gain the most from it. A good teacher can also add to a learning experience by asking the right questions and motivating students to move through the cycle (Rodrigues, 2004). In contrast, an outstanding teacher knows when to step back and allow the learners to be independent (Rodrigues, 2004). The teacher is not necessary for experiential learning to occur, as the student is the one who drives and motivates the learning (Rodrigues, 2004).

Kolb's Experiential Learning Model (ELM) is thorough and fits a broad spectrum of learners. By leading students through the steps in this model, the *AEUGS* program allows them to build on concrete experiences involving the abstract concept of empathy. Students are given opportunities to have an experience, reflect on that experience, make conclusions about their experience, and then plan their real-life experiments to try out the skill learned in class. For example, one activity in *AEUGS* that uses this cycle is called *Perspective Taking and Conflict.* In this activity, participants are asked to take on the role of two people in a conflict such as a

couple who is having financial struggles as the husband searches for a new job, or a granddaughter who is trying to find time in her college schedule to visit her lonely grandmother. The participants are assigned groups and are asked to first act out the situation without empathy and then act it out again, but this time using empathetic responses. The acting out of the scenario is the concrete experience of Kolb's ELM, as well as some reflection and active experimentation as the participants plan how they will show empathetic responses and then react to how the experience makes them feel.

The class watches both reenactments of the conflict, and then everyone has the opportunity to respond to what they saw, allowing them to reflect on the experience and make conclusions about the experience (two more components of Kolb's ELM). Finally, the participants are asked to take the assignment home with them for more reflection and planning. They are asked to determine when in their lives they may have experienced a conflict and determine how they could respond with empathy to that conflict. Through this activity, and others, by the time they have completed *AEUGS,* the participants have explored the multiple facets of empathy and begun to construct the meaning of what empathy is in their lives while cycling through Kolb's ELM.

Another essential aspect of Kolb's model, where *AEUGS* is concerned, is that the model allows students to have experiences and make meaning of those experiences on their timeline. Empathy is a very personal experience. Learners must be willing to open themselves up to vulnerability to experience empathy, and each learner will do that at a self-driven pace. Teachers can facilitate the process by asking the right questions, but they cannot force students to learn to be empathetic and act on that empathy if the students are not ready. Allowing students to direct their learning in this area is also part of building a safe environment for

learning and deep discussion. Kolb's model, with its emphasis on self-driven learning, is the perfect model to use to develop *AEUGS* reason.

In conclusion, Kolb's Experiential Learning Model was used as a framework for the *AEUGS* program for three reasons. First, Kolb's model is simple to understand and direct in its application. Secondly, it allows learners to have experiences and build on those experiences in real-life situations (McLeod, 2013). Finally, Kolb's model encourages students to conduct self-paced learning, which is vital for a concept as complex and uncertain as empathy (Itin, 1999; Moon, 2004; Rodrigues, 2004).

COMPONENTS OF EMPATHY AND EMPATHY EDUCATION

This study reviewed five literature-derived components of an empathy that informed the structure of the empathy education course. Each of these five components was analyzed in order to understand their impacts on the level of empathy reported by the participants. The first is demographics, including age, gender, and race. The second through fifth are the four components of empathy which are included in *Activating Empathy for Undergraduate College Students (AEUGS).* They include the ability to define empathy, the ability to perceive another's emotions, the ability to understand another's emotions, and the ability to separate someone else's emotions from one's own emotions.

Component 1: Demographics and Empathy

Age and empathy. The results across studies of age and empathy in neuroscience, sociology, and psychology have shown that as humans age, they tend to lose their ability for cognitive empathy, or the ability to understand others' thoughts and feelings (Beadle & de la

Vega, 2019; Beadle et al., 2013; Grühn et al., 2008). Adults do, however, maintain or even gain a better ability for emotional empathy, or the ability to feel emotions that are similar to others', often leading to social activism (Beadle & de la Vega, 2019; Beadle et al., 2013; Grühn et al., 2008). Losing cognitive empathy but gaining emotional empathy seems to level out so that older adults maintain the same amount of empathy throughout their lifetime (Grühn et al., 2008). In general, empathy is associated with prosocial behaviors and a healthier way of living, which affects the quality of life of older adults' relationships (Beadle et al., 2013; Grühn et al., 2008). Reduced levels of empathy are associated in older adults with greater loneliness (Beadle & de la Vega, 2019). In general, as humans age, they may be more motivated than younger adults to help others due to their increased levels of emotional empathy (Beadle et al., 2013).

Gender and empathy. Across a variety of studies comparing men (i.e., a human who identifies as male) and women (i.e., a human who identifies as female) have found that men score lower on a variety of empathy measures (Christov-Moore et al., 2014; Cohn, 1991; Eisenberg & Lennon, 1983; Feingold, 1994; Hall, 1978, 1984; Hoffman, 1977; Matsangidou et al., 2018; O'Brien et al., 2013; Rueckert & Naybar, 2008; Silke et al., 2019; Thompson & Voyer, 2014).

In a systematic review of studies into the expression of empathy based on a variety of factors, Silke et al. (2019) showed that the majority of studies in the expression of empathy in youth show that females are more willing to express empathy than males. In a study conducted on the relationship of the right cerebral hemisphere of the brain and empathy, men and women could both recognize emotions, but men scored significantly lower on the accompanying empathy questionnaire (Rueckert & Naybar, 2008). In a study done by Matsangidou et al. (2018), women were shown to be more in touch with the feelings of others than were men.

These gender differences may have roots in biology as well as culture. Studies on human infants show that female babies are more likely than male babies to exhibit early empathetic signs, such as contagious crying, neonatal imitation, and general social interest and sensitivity (Christov-Moore et al., 2014). And these differences can be seen as the babies become toddlers, adolescents, and adults - females generally appear more prosocial, wanting to help others in distress, while males seem to have more control over their empathy, having the ability to choose when to show it or not (Christov-Moore et al., 2014).

Race and empathy. Starting to talk about race and empathy can be challenging, especially since there is a lot of variety in the expression of empathy across cultures and ethnic identities (Silke et al., 2019). The research shows that emotions and emotional recognition do not vary by race or culture, but many people show low confidence in recognizing and understanding the emotions of another race (Chiao & Mathur, 2010; Matsangidou et al., 2018; Sessa et al., 2014; Soto & Levenson, 2009).

In neuroscience, completed studies suggested that the neural responses that show empathy are heightened for people of the same race, but not for those of other races (Chiao & Mathur, 2010). They cite evidence that this is a result of culturally created biases, rather than an innate trait, as the results seem to be linked to social groups (Chiao & Mathur, 2010). Others found that while neural responses were the same, white participants reported less confidence in their ability to state what emotion and to what level someone of another race was feeling that emotion (Matsangidou et al, 2018; Soto & Levenson, 2009). In general, it seems that most people can recognize emotions in another race, but might not be confident in if they have detected the emotion correctly, showing that there is a race-biased stage of pain sharing and mirroring, followed by a race-unbiased stage of cognitive evaluation of pain (Sessa et al, 2014).

Component 2: The Ability to Define Empathy

Empathy is a complex topic with multiple layers that reaches into a variety of disciplines. Having a basic understanding of empathy, and how it is different from similar terms such as compassion or feelings, allows for a person to act in truly empathetic ways (Decety, 2011). When most people think of empathy, they think of being kind or supporting someone through a challenge. While this is part of showing empathy, empathy also has complex effects on the giver's brain, social interactions, and achievements (Caprara et al., 2000; Eisenberg et al., 2006; Feshbach & Feshbach, 2009; Hoffman, 1977; Saarni, 1990; Tori & Batson, 1982; Wentzel, 1993;). Understanding the complexities and benefits of empathy will help an empathizer navigate the layers of empathy in the most efficient ways.

Component 3: The ability to perceive emotions

In the literature review it became clear that an important component of empathy is the ability to perceive or recognize that someone else has inner emotions (Batson et al., 1997; Bråten, 2013; Coplan, 2011; Kohut, 1982; Levenson & Ruef, 1992). Psychologists such as Kohut (1982) viewed empathy as an observing what others are feeling without imposing one's own values on their emotions. With proper brain development, a human can recognize universal emotions in another across a multitude of cultures. person who feels empathy mimics the emotions of the person they are observing (Baston et al., 1997). In the same sense, Charles Darwin and Wilhelm Wundt focused on innate and inherited aspects of the expressions of emotions, arguing for their universality across cultures (Juckel et al., 2018; Newen et al., 2015). With proper brain development, a human can recognize universal emotions in another across a multitude of cultures.

As Bråten (2013) states, “In the first weeks after birth, infants have been documented to imitating a variety of adult initiated gestures, such as tongue protrusion, brow motions, head rotation, finger movements, gestural features expressing surprise or delight, and even vocal (vowel) productions” (p. 3). Bråten (2013) goes on to establish how such imitations happen early in development, demonstrating what he calls the shared human foundations of empathy. Bråten (2013) is only one researcher who studied this automatic, human foundation of empathy. Batson et al. (1997) explain it as the first component of empathy, which is when someone physically mimics another’s emotions. Coplan (2011) calls it emotional contagion, similar to a disease that is spread without any actions from the host. She explains it is an automatic process and one of the first reactions that happens when someone begins to experience an empathic response (Coplan, 2011).

On the physical level, Levenson and Ruef (1992) found that when someone detects another’s emotions, they go through a similar physical response. For example, when someone perceives another’s positive emotions, they have a low cardiovascular response (Levenson & Reuf, 1992). Similarly, if another person is feeling stressed, an observer will have similar stress responses in their body (Levenson & Reuf, 1992). This response is uncontrolled by the person perceiving another’s emotions and happens naturally in the body (Levenson & Reuf, 1992).

This third component is not controlled by the observer and creates the foundation for the fourth component of empathy (Batson et al., 1997; Coplan, 2011; Kohut, 1982). Once someone perceives the emotion of another, the perceiver must choose if they want to understand these emotions more deeply to move into the fourth component of empathy (Coplan, 2011; Decety & Moriguichi, 2007; Hoffman, 1984; Kohut, 1982).

Component 4: The Ability to Understand Someone's Emotions

Once someone perceives the emotions of another, they must decide to understand the emotions of another (Coplan, 2011; Decety & Moriguichi, 2007; Hoffman, 1984; Kohut, 1982). Kohut (1982) emphasizes that while the initial empathetic reaction is involuntary, the subject feeling empathy consciously chooses to sustain the more long-term empathetic reaction. He gives the example of a mother who must first feel empathy for her child's needs before she can apply the correct actions to help that child (Kohut, 1982, p.397). Therefore, while the mother might have an initial involuntary empathetic reaction, she must choose to sustain that empathy to figure out which actions to take to help her child in need (Kohut, 1982).

Hoffman (1984) surmised that if adults show healthy cognitive development, over time, they can learn to understand what another person is feeling. Coplan's (2011) second process of empathy is self-oriented perspective-taking, or "pseudo-empathy," which occurs when a person imagines what someone else is feeling in a situation (p.54). Similarly, Decety and Moriguichi (2007) discuss mental flexibility and perspective-taking, or understanding how a situation is affecting someone else, as essential aspects of empathy.

There are two ways in which humans can understand others' emotions. The first, which can be learned and refined over time, is a cognitive understanding (Juckel et al., 2018). In the case of someone experiencing the death of a beloved family member, an outsider may not have a similar experience, so they may not feel the exact emotions of their friend. But the person may recognize the emotions the other is feeling and try to relate to them (Juckel et al., 2018). On the other hand, someone might feel the same way someone else does in a situation. Suppose the same person mentioned above witnesses their friend lose a loved one and has lost a similar loved one themselves. They are reminded of the emotions they felt when going through a

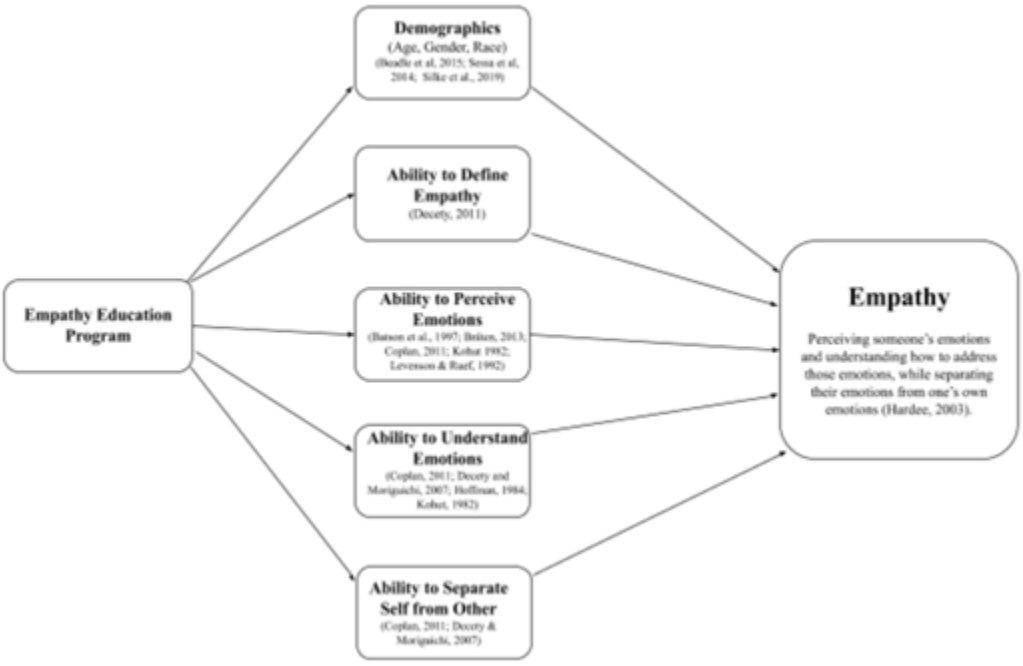
similar situation (Juckel et al., 2018). Both types allow for empathy to occur, just at different depths of understanding (Jucket et al., 2018; Simone et al., 2009). Everyday cases of recognizing emotions are a combination of empathic and cognitive understanding (Juckel et al., 2018; Simone et al., 2009). Once a perceiver recognizes and understands the emotions of another, they need to realize that these emotions are not their own.

Component 5: Separating One's Emotions from Another's Emotions

According to the research, a final component of empathy is the ability for an empathizer to recognize that another person's feelings are not their own or be able to separate their emotions from the emotions of the person they are empathizing with (Coplan, 2011; Decety & Moriguichi, 2007). To Coplan (2011), "empathy proper" is "a process through which an observer simulates another's situated psychological states while maintaining clear self-other differentiation" (p.58). Decety and Moriguichi (2007) identified a component of empathy to be *affective sharing*, or reflecting another person's observable experience while remaining self-aware that their emotions are not your own. They also maintain that one must be able to control their own emotions amid someone else's emotional reactions (Decety & Moriguichi, 2007).

These five components of empathy were operationalized as part of the definition of empathy examined in this study. In addition to demographics, considering these four dimensions emphasize which components of *AEUGS* have the most significant impact on the empathy levels of participants in this study.

Figure 3.3 Conceptual model of the five components of empathy education that lead to empathy



CONCLUSION

The *Activating Empathy for Undergraduate Students* program was designed to teach the five components of empathy, including; defining empathy, perceiving another's emotions, understanding another's emotions, and being able to separate oneself from another's emotions. In addition to demographics, these components of empathy were included in *AEUGS* so they could be analyzed to determine which has the most significant impact on a participant's empathy levels. The next chapter looks at the data that was collected, and the following chapter analyzes the data findings.

CHAPTER IV

RESEARCH METHODS

INTRODUCTION

This chapter will explain the research methods used to investigate which components of an empathy education program have the greatest effects on participant empathy levels. It will look at the purpose and objectives of the study, the research questions, the empathy education program itself, and research design elements such as study population and recruitment and data collection.

PURPOSE, OBJECTIVE, AND RESEARCH QUESTIONS

The purpose of this study was to explore which of the components of empathy are influenced the most by an empathy education program. The five components are demographics of participants, the ability to define empathy, the ability to perceive someone else's emotions, the ability and desire to understand someone else's emotions, and the ability to differentiate someone else's emotions from oneself. The objective of this study was to teach the empathy education program *Activating Empathy for Undergraduate College Students (AEUGS)* to participants and measure their empathy levels for each of the five components after they completed the course.

The following research questions guided the study:

- RQ1: How do demographics such as age, gender, and race affect the empathy levels of participants before and after completing the AEUGS program?

- RQ2: What is the relationship between the ability to define empathy and empathy levels?
- RQ3: What is the relationship between the ability to perceive someone else's emotions and empathy levels?
- RQ4: What is the relationship between the ability to understand someone's emotions during and interaction and empathy levels?
- RQ5: What is the relationship between the ability to differentiate another's emotions from oneself and empathy levels?

IRB APPROVAL

This study was submitted to the Institutional Review Board (IRB) of the The Pennsylvania State University for approval in spring of 2019. Approval as an exempt, as the study shows minimal risk to participants, was granted in April 2019 (IRB #STUDY00012053). See Appendix B on page 125 for correspondence of the approval. Participants did not have to sign consent forms as the study was ruled exempt.

OVERVIEW OF THE STRUCTURE OF THE *ACTIVATING EMPATHY FOR UNDERGRADUATE COLLEGE STUDENTS*

A curriculum called *Activating Empathy* was first developed by Ciara Boylan and Pat Dolan in 2017 at the UNESCO Child and Family Research Center of the National University of Ireland, Galway in Galway, Ireland. Currently three versions of this program exist. The first version is designed for high school aged students between the ages of 14 and 18 living in Ireland. The second version was modified in 2018 for an American high school audience

between the ages of 14 and 18. The third and final version takes the nuances of college-aged students into account and was designed for ages 18 to 25. This third version was used in this study. It is called *Activating Empathy for Undergraduate College Students (AEUGS)* and can be found in Appendix D on page 128.

AEUGS was developed specifically for the audience of undergraduate college students between the ages of 18 and 25, since high school (aged 14 to 18 years old) students and undergraduate college aged students (generally aged 18 to 22 years old) learn and are developing in different ways (Blimling, 2010; Jordan et al., 2018; Matthews & Hamby, 1995; Verhoven et al., 2019). For example, Matthews and Hamby (1995) found that high school students excelled in situations using data and inductive reasoning; while college students preferred to generate ideas from a variety of perspectives while working with other people to gather information. For high school students, based on their developmental characteristics, learning should be closely guided by teachers and explorative learning experiences must be meaningful and situated in a supportive classroom climate (Verhoven et al., 2019). For undergraduate college students, experiential education has been shown to provide development opportunities that contribute to student success (Jordan et al., 2018). In addition, while high school student development is often a focus, undergraduate college students are also still developing their individual identities while navigating smaller social groups within the larger culture of an academic setting (Blimling, 2010). These factors were taken into consideration when developing *AEUGS* with the undergraduate college student audience in mind.

AEUGS has five main components. These components relate to the variables which are examined in this study in their relationship and effect on empathy. The first component is exploration of the definition of empathy from an assortment of resources including literature,

expert lectures, media, and scholarly research. In order to recognize empathy in the world, participants first have to understand what the complex and layered term means (Howe, 2013). The second component is practice in perceiving another's emotions (Batson et al., 1997; Bråten, 2013; Coplan, 2011; Kohut 1982; Levenson & Ruef, 1992). For example, participants complete a variety of activities designed to help them recognize when another person is having an emotion and determine what emotion is being displayed. The third component of *AEUGS* is the ability and desire to understand another's emotions (Coplan, 2011; Decety & Moriguichi, 2007; Hoffman, 1984; Kohut, 1982). After the participants learn how to recognize emotions, they are then guided through a series of activities designed to help them understand how someone else feels while having these emotions. These activities involve placing participants into situations that are unusual or different and helping them to develop an understanding how someone might feel. Finally, the fifth component of the lessons and also the fifth variable of the study, is the ability to feel someone else's emotions while also remaining aware that their emotions are separate from the participant (Coplan, 2011; Decety & Moriguichi, 2007). A variety of exercises in the curriculum that encourage participants to practice this concept and differentiate between themselves and others.

Program Delivery. While all participants received the same content, the hourly format of the presentation of the course was different based on the needs of participants. When there was a discrepancy in hours, participants either had to complete some of the individual activities at home or shorten the length of time the activities were completed in class. There were two versions of the *AEUGS* course that were offered once a week for three weeks. The first was Cohort 1 which was offered for three hours a week for three weeks. The second was Cohort 5 which was offered for one hour a week for three weeks. In addition, the course was offered for

Cohorts 2, 3, and 4 for two hours per week for four weeks. Refer to Figure 4.1 below to review the format of these courses.

Table 4.1 Cohort Dates and Lengths of Classes

Cohort Number	Dates of Program	Length of Each Class
1	April 4, 11, 18, 2019	3 hours
2	September 26, October 2, 10, 17, 2019	2 hours
3	October 23, 30, November 6, 13, 2019	2 hours
4	October 24, 31, November 7, 14, 2019	2 hours
5	November 8, 11, 15, December 6, 2019	1 hour

As with any research involving human participants, a researcher has to be open to adaptability and take these changes into consideration when evaluating results. There were a few reasons for this disparity in curriculum presentation. Cohort 1 was the first time the course was offered in front of undergraduate college students and needed to be adapted for that audience. Cohorts 2, 3, and 4 were designed to fit the changes needed after Cohort 1 was completed. Cohort 5 was a special group of participants who were part of Penn State's AEE 460 course, which is Foundations in Leadership Development. All the disparities in course presentation were considered and effects on study results will be considered and discussed in Chapter VI, the discussion chapter of this dissertation.

RESEARCH DESIGN

This study used a quasi-experimental, mixed methods research design. The quasi-experimental design was chosen because it was not possible to use random assignment (Gribbons & Herman, 1996). The mixed methods approach allowed for a deeper understanding of participant experience, although the qualitative data was used as a supplement to the

quantitative data and was not as formally structured as is seen in some studies (Creswell, 2006). The data was collected using a pre-test, treatment, post-test model, in order to evaluate the effects of the treatment (the components of the program *Activating Empathy for Undergraduate College Students)* on participants.

The research was designed to explore which of the five components of an empathy education program have the greatest effect on the study population. These five components include (1) demographics, (2) defining empathy, (3) recognizing another's emotions, (4) understanding another's emotions, (5) recognizing another's emotions are separate from one's own emotions. Quantitative data was collected through a pre-test and post-test. Qualitative data was collected directly after the program was delivered via focus groups of participants. The survey instrument and focus groups are discussed later in the Instrument Development section of this chapter.

STUDY LOCATION

This study was completed in University Park, Pennsylvania. This study's pilot and subsequent runs represent the first time the program was carried out in the United States with undergraduate college students aged 18-25.

POPULATION AND SAMPLE

Recruitment

There were two methods of recruitment for this study. The first was through a recruitment flyer sent to the entire population of undergraduate students at Penn State's University Park campus. The second method was offering the course during Penn State's AEE 460 course, which is Foundations in Leadership Development.

For the first method of recruitment, participants were recruited from Penn State University's University Park undergraduate student body, which is made up for 40,363 students total (PSU, 2020). In order to recruit participants, the researcher created a flyer that highlighted the program's content and expressed the connection to UNESCO, as well as the advantages of having a UNESCO certification in empathy once the program was completed (see Appendix F on page 155 for a copy of this flyer). These flyers were shared via e-mail with all Deans and Department Chairs for undergraduate majors at Penn State, as well as presidents and vice-presidents of student clubs at University Park. All undergraduate Penn State students were encouraged to sign up for the course, with an emphasis on the UNESCO connections. The UNESCO connections acted as an incentive, which generally leads to small significant improvements in the number of participants who volunteer for studies (Jennings et al., 2015).

If students were interested in taking *AEUGS* they were to click on the link in the flyer that allowed them to register for the class on Google forms, thus giving the researcher an idea of how many students would be interested in taking the course. Questions on the online form included the following:

- Name
- E-mail address
- Anticipated year of graduation
- College and major
- Is there anything else the instructor should know?

The second method of recruitment was to offer the course as part of AEE460, Foundations in Leadership Development. These students were made aware of *AEUGS* being offered as part of AEE460. They were given information about the research study and its

exempt status. Upon completion of the *AEUGS* course, students received a certification from UNESCO certifying they had completed the program. An example of this certificate can be found in Appendix F on page 155.

Description of Study Population

The study population was formed through volunteers who responded to the flyer or were in AEE460 in the of Fall 2019. See Table 4.1 for the program schedule, recruitment schedule, number of sign ups, and number of actual participants for each cohort of the *AEUGS* program. Every participant who signed up was offered a spot in the program.

Table 4.2 Study participants and how they were recruited

Cohort Number	Recruitment Dates	Number of Sign Ups	Dates of Program	Number of Participants that remained until post-test	How Recruited
1	March 13 – April 4, 2019	50	April 4, 11, 18, 2019	24	E-mail to College Deans and Clubs
2	September 10 - October 2, 2019	16	September 26, October 2, 10, 17, 2019	8	E-mail to College Deans and Clubs
3	October 1 – October 23, 2019	26	October 23, 30, November 6, 13, 2019	15	E-mail to College Deans and Clubs
4	October 1 – October 24, 2019	13	October 24, 31, November 7, 14, 2019	11	E-mail to College Deans and Clubs
5	No recruitment period	34	November 8, 11, 15, December 6, 2019	34	Students in AEE 460 course
			Total	**92**	

SURVEY INSTRUMENT DEVELOPMENT AND RELIABILITY

In Chapter 3, the literature on theory revealed four components of the concept of empathy to be analyzed to understand their impact on empathy. These components translate into dependent variables that will be measured via the pre-test and post-test survey instruments. These four dimensions are understanding the definition of empathy, the ability to perceive another's emotions, the ability and desire to understand another's emotions, and finally the ability to feel what another is feeling while differentiating self from other. See Figure 3.1 for a visual example of how these concepts translated into study variables.

Dependent Variable

In this study, the dependent variable is the level of empathy shown by participants. This was measured before they complete the *Activating Empathy for Undergraduate Students (AEUGS)* program in order to collect a baseline measurement using the dependent variables as the metric for testing. Empathy level was again assessed at the end of the *AEUGS* program using these same variables.

Both the pre-test and the post-test included all 60 questions from the Empathy Quotient set to a five-point scale Likert Scale (Baron-Cohen & Wheelwright, 2004). While the traditional Empathy Quotient is set to a four-point Likert Scale, the researcher wanted to give participants the option to choose a neutral response as empathy can trigger strong responses in participants (Lozano et al., 2008; Revilla et al., 2013). Research also shows that data from Likert items becomes significantly less accurate when the number of scale points drops below five or above seven (Carifio & Perla, 2007). These factors lead to all quantitative questions being asked with a five-point Likert scale response.

In addition to the 60 Empathy Quotient questions, the pre-test also included three demographic questions and five Likert scale questions designed to evaluate participant understanding of empathy. The final two questions on the pre-test are qualitative, open-ended questions designed to assess participants' understanding of empathy and their experiences with empathy before taking the course. See Appendix A on page 114 for a copy of the pre-test.

The post-test was designed with the main part again being the 60 Likert-scale questions from The Empathy Quotient. The three demographic questions from the pre-test were also repeated in the post-test. Five Likert-scale questions were included to evaluate participant understanding of empathy after receiving the treatment. The two qualitative, open-ended questions were also repeated in order to capture some participant experiences with empathy during and after the course. Finally, a section was added to evaluate the course itself. This section included one Likert-scale question and seven short answer qualitative questions designed to evaluate the course. See Appendix A on page 114 for a copy of the post-test.

Instrument Validity and Reliability

The pretest and posttest surveys were designed and delivered in Google Forms. All surveys were anonymous and confidential. Pre-test and post-test scores were compared by averages for all participants and not by individuals in order to maintain anonymity. Dillman's Total Design Method approach to survey design was used throughout the survey, specifically when designing the flow of the survey questions (Dillman et al., 2014). The survey instrument was reviewed by a panel of experts.

Much of the pre-test and post-test survey instrument is comprised of the Empathy Quotient. The Empathy Quotient (EQ) is a 60-question qualitative instrument designed to

measure empathy (Baron-Cohen & Wheelwright, 2004). A series of studies conducted by Lawrence et al. (2004) confirms that the EQ provides a "reliable and valid way of measuring empathy via self-report in both healthy individuals and clinical populations" (p.919). The test-retest reliability for the EQ is $r = 0.97$, which is also highly significant ($p < .001$) (Baron-Cohen & Wheelwright, 2004).

To calculate participant pre- and post- test scores, each Empathy Quotient question (questions 9 to 68 in both pre and post surveys) was assigned a value based on the meaning of the question. These values were determined by the creators of the Empathy Quotient (Baron-Cohen & Wheelwright, 2004). Some questions are break questions, and their responses were not counted in the final score. Participants could score a total of 0 to 80 points for the empathy quotient portion of the surveys. See Table 4.2 below for a complete list of the Empathy Quotient questions and how they were assigned values. As shown, questions that are positively associated with empathetic responses scored two points for a response of "definitely agree" and one point for a response of "slightly agree (Baron-Cohen & Wheelwright, 2004). Questions that are negatively associated with empathetic responses score two points for "definitely disagree" and one point for "slightly disagree". All other responses to these questions were not scored with any points (Baron-Cohen & Wheelwright, 2004). There are also 20 break questions included in the Empathy Quotient (Baron-Cohen & Wheelwright, 2004). These questions were not scored.

Table 4.3 Pre- and Post- Survey Questions aligned to Empathy Quotient Questions and how they were scored

Value for Score	Pre- and Post- Survey Question Number (Empathy Quotient Question Number)
Score two points for each of the following items if the participant answered, "definitely agree", or one point if the participant answered "slightly agree". All other responses receive zero points. (Baron-Cohen & Wheelwright, 2004)	9(1); 14(6); 27(19); 30(22); 33(26); 42(35); 43(25); 44(36); 45(37); 46(38); 49(41); 50(42); 51(43); 52(44); 60(52); 62(54); 63(55); 65(57); 66(58); 67(59); 68(60)
Score two points for each of the following items if the participant answered, "definitely disagree", or one point if the participant answered, "slightly disagree". All other responses receive zero points. (Baron-Cohen & Wheelwright, 2004)	12(4); 16(8); 18(10); 19(11); 20(12); 22(14); 23(15); 26(18); 29(21); 34(27); 35(28); 36(29); 39(32); 41(34); 47(39); 54(46); 56(48); 57(49); 58(50)
These questions are break questions, and their values are not added to the total Empathy Quotient score. (Baron-Cohen & Wheelwright, 2004)	10(2); 11(3); 13(5); 15(7); 17(9); 21(13); 24(16); 25(17); 28(20); 31(23); 32(24); 37(30); 38(31); 40(33); 48(40); 53(45); 55(47); 59(51); 61(53); 64(56)

INDEPENDENT VARIABLES

There are five independent variables measured in this survey instrument. The first is demographics including age, gender, and race. The second is the ability to define empathy. The third is the ability to perceive another's inner emotions. The fourth is the ability and desire to understand another's emotions. The fifth is the ability to feel what another is feeling while differentiating self from other. Variables two through five are components that make up the definition of empathy, based on the literature reviewed in Chapter 2. *Activating Empathy for Undergraduate College Students* was designed to teach each of these components in order to test if training in these components influences empathy.

Each of these components of the concept of empathy come from an extensive literature review. The first of these components is the ability to define empathy. Empathy is a complex and multi-dimensional concept; and in order to recognize it in the world, participants first must understand the definition of the term (Howe, 2013). The second of these components is the ability to perceive another's inner emotions, which most human infants can do at a very early

age (Batson et al., 1997; Bråten, 2013; Coplan, 2011; Kohut 1982; Levenson & Ruef, 1992). The third component is the ability and desire to understand another's emotions. This component can be cultivated over time, if the desire to do so is there (Coplan, 2011; Decety and Moriguichi, 2007; Hoffman, 1984; Kohut, 1982). The fourth component is the ability to feel what another is feeling while differentiating self from other (Coplan, 2011; Decety & Moriguichi, 2007).

The survey instrument was designed to analyze if participant empathy levels change under the influence of these four components of empathy. See Table 4.3 below for a line-up of the variables and their connection to the questions in the survey.

Table 4.4 Objectives, variables, sources of data, type of data, and analysis technique for quantitative data

Research Objective	*Research Question*	*Measurement Tool*	*Type of Data*	*Analysis Technique*
To teach empathy education program *Activating Empathy for Undergraduate College Students* to participants and measure their empathy levels for each of the five components of empathy after they complete the course.	**Research Question #1:** How do *demographics* such as age, gender, and race affect the empathy levels of participants before and after completing the *AEUGS* program? (Beadle et al., 2015; Sessa et al., 2014; Silke et al., 2019)	Pre- and Post- Survey Questions: 1, 2, 3	Nominal	Frequencies Percentages
	Research Question #2: What is the relationship between *ability to define empath*y and empathy levels? (Zahavi & Overgaard, 2013; Howe, 2013)	Pre- and Post- Survey Questions: 4,5,6	Ordinal	Frequencies Percentages
	Research Question #3: What is the relationship between the ability to perceive someone else's emotions and empathy levels? (Batson et al., 1997; Bråten, 2013; Coplan, 2011; Kohut 1982; Levenson & Ruef, 1992) Two components:		Ordinal	Frequencies Percentages

	(1) Ability to perceive emotions that are not explicitly expressed. (2) The ability to recognize typical emotions felt in a situation	(1) Pre- and Post- Survey Questions: #9, 33, 49, 52, and 63 (2) Pre- and Post- Survey Questions: #30, 43, 44, 46, 50, and 67		
	Research Question #4: What is the relationship between the ability and desire to understand someone's emotions and empathy levels? (Coplan, 2011; Decety and Moriguichi, 2007; Hoffman, 1984; Kohut, 1982) Two components: (1) Ability to respond to another's emotions. (2) Ability to understand how someone feels during an interaction.	(1) Pre- and Post- Survey Questions: #12 and 16 (2) Pre- and Post- Survey Questions: #51 and 62	Ordinal	Frequencies Percentages
	Research Question #5: What is the relationship between the ability to differentiate another's emotions from oneself and empathy levels? (Coplan, 2011; Decety & Moriguichi, 2007)	Survey Questions: #20,36,45,47,54,56,57	Ordinal	Frequencies Percentages
Questions #9-68 come from (Baron-Cohen & Wheelwright, 2004)				

CALCULATING COMPOSITE SCORES FOR INDEPENDENT VARIABLES

Four of the five independent variable scores were combined into composite scores before being analyzed for frequency, bivariate, and linear regression analysis when compared to pre- and post- test scores. These independent variables that were combined into composite scores were (1) the ability to define empathy; (2) the ability to perceive another's emotions; (3) the ability to understand another's emotions and respond to those emotions; and (4) the ability to separate another's emotions from one's own. These composite scores were formed based on completion of an exploratory factor analysis completed using questions that made up each component. The composite scores were created to preserve the degrees of freedom of these variables. While it would have been interesting to look at each question on the survey individually, the limited population of the study (n = 92) required the questions be combined in logical ways to preserve these degrees of freedom.

The data were factor analyzed using several models/rotations (principal axis factoring and least squares methods with a varimax, quartimax, and direct oblimin rotations). The criteria established in advance of the selection of factor items were: a factor loading of .35 or higher; at least a .10 difference between the item's loading with its factors and each of the other factors; and interpretability (Kim and Mueller, 1978). In all analyses, only one factor was identified which had an eigenvalue greater than 1.0. Additionally, review of the screen test plots indicated that a one factor solution was most appropriate. These findings were consistent when analyzing the overall data.

Reliability of the scales was then tested using Cronbach's Alpha. Cronbach's Alpha is a measure of internal consistency reliability in which a score ranges from zero to one (Ursachi et al., 2015). A general accepted rule is that a score of 0.6-0.7 indicates an acceptable level of

reliability, and 0.8 or greater a very good level (Ursachi et al, 2015). The Cronbach Alpha values are listed in the descriptions below, along with lists of which questions on the pre-test and post-test surveys made up the composite scores for each component and the scales on which the variables were scored

The Ability to Define Empathy

Questions #4, 5, and 6 on the pre- and post- surveys made up the scores for this variable. Participants could score from 0 to 15 points, with 0 to 5 representing a below average ability to define empathy, 6 to 10 representing an average ability to define empathy, and 11 to 15 representing an above average ability to define empathy. Questions for this section were created by the researcher with influences from the survey instrument used by Odera (2018), with a Cronbach's α of 0.618.

The Ability to Perceive Another's Emotions

This variable was split into two dimensions. The first is the ability to perceive emotions that are not explicitly expressed. The responses for questions #9, 33, 49, 52, and 63 on the pre- and post- surveys were added together to score this concept. Participants could score from 0-10 points for this dimension, with a score of 0 to 3 representing a below average ability to perceive hidden emotions, a score of 4 to 7 representing an average ability to perceive hidden emotions, and a score of 8 to 10 representing an above average ability to pick up on hidden emotions. The Cronbach's α for this concept was 0.799.

The second dimension was the ability to recognize typical emotions felt in a situation. To address this dimension, the scores for questions #30, 43, 44, 46, 50, and 67 on the pre- and

post- surveys were added together. Participants could score from 0 to 12 points, with a score of 0 to 5 reflecting a below average ability to recognize typical emotions, a score of 6 to 9 reflecting an average ability to recognize typical emotions, and a score of 10 to12 reflecting an above average ability to recognize typical emotions. These score breakdowns were based on natural breaks in the data that showed when initial frequency analysis was run and compared to the mean in the data. When reliability was run on this measure, it produced a Cronbach's α of 0.575. While this could be higher, the researcher decided to leave the variable in the study since there was a small number of participants, and this variable helped add to the overall picture of the study results.

The Ability to Understand Another's Emotions

This variable was split into two dimensions. The first is the ability to respond to another's emotions. The responses for questions #12 and 16 on the pre- and post- surveys were added together to score this concept. Participants could score from 0 to 4 points for this concept, with a score of 0to 1 representing a below average ability to respond to another's emotions, a score of 2 representing an average ability to respond to another's emotions, and a score of 3 to 4 representing an above average ability to respond to another's emotions. The Cronbach's α for this concept was 0.700.

The second dimension was the ability to understand how someone feels during an interaction. To address this dimension, the scores for questions #51 and 62 on the pre- and post- surveys were added together. Participants could score from 0 to 4 points, with a score of 0 to 1 reflecting a below average ability to understand how someone feels during an interaction, a score of 2 reflecting an average ability to understand how someone feels during an

interaction, and a score of 3 to 4 reflecting an above average ability to understand how someone feels during an interaction. When reliability was run on this measure, it produced a Cronbach's α of 0.556. While this could be higher, the researcher decided to leave the variable in the study since there was a small number of participants, and this variable helped add to the overall picture of the study results.

The Ability to Separate Another's Emotions from One's Own Emotions

This variable was calculated using #20, 36, 45, 47, 54, 56, 57 on the pre- and post-surveys, which were added together. Participants could score from 0 to 14 points, with a score of 0 to 5 reflecting a below average ability to separate one's emotions from another's emotions, a score of 6 to 9 reflecting an average ability to separate one's emotions from another's emotions, and a score of 10 to 14 reflecting an above average ability to separate one's emotions from another's emotions. The Cronbach's α for this concept was 0.636.

GATHERING AND APPLYING QUALITATIVE DATA

During the last class, in addition to the surveys, participants took part in a focus group with questions to capture what they learned from the course. The questions asked during this focus group included:

- What is empathy?
- Have you noticed more empathy in your life now that you have taken this course? Can you explain why or why not?
- Do you find yourself being more or less empathetic since completing this course?

- What was your favorite part of the course?

These questions being asked in a dynamic group discussion allowed for a synergy of collected data that enriched the quantitative survey results. While not a formal qualitative data collection process, this data helped to enhance, support, and better define the quantitative data. The focus groups allowed for a multi-dimensional look at the quantitative data.

LIMITATIONS

This study had a few limitations which could be addressed in future studies or if this study is conducted again. The first limitation is that there was not a follow up to see if empathy levels change in the long term, after participants completed the course. An attempt was made to try and collect this data, but there were very few respondents. To remedy this, the researcher could have prepared the participants better for a follow up survey or perhaps offer an incentive. There were, however, bits of data that were collected post-research, including contacts made by a few participants months after the study was completed. These contacts added to the richness of the data, despite them not counting as a follow up.

The second limitation is the generalizability of the study. The sample size was small (92 participants in the post-study), making the results hard to generalize to a larger population. Also, the population consisted only of undergraduate students from Penn State University, and so other universities should be researched to see if the results would be similar or different.

Finally, the study did not have a viable control group to check and see if changes were due to the course itself or due to outside factors. An attempt was made to recruit and survey a control group, but the response rate was very limited with only two participants. Future studies should build in a more viable control group to check if outside events and the human response

to such events would influence empathy levels of those who were not participants in the *AEUGS* course at the same time, and by how much. These control group participants should receive the same pre-test and post-test as the other participants, except they will not complete the course itself.

SUMMARY

This chapter explained the research methods used to collect quantitative and qualitative data in this mixed methods study. The next chapter will analyze the data that was collected in order to synthesize conclusions about the data that will be seen in the final chapter.

CHAPTER V

ANALYSIS AND FINDINGS

The quantitative survey data resulting from this study were analyzed using SPSS analysis software. Data were cleaned, and in some cases, combined to form scores for a variable. In this section, each of these scores will be described and the process by which they were obtained will also be explained. In addition, an overview of methods will be provided before detailing the analysis and findings.

Descriptive statistics were used to review the data, which included frequencies and percentages. After tabulating the frequencies of responses, a bivariate analysis was conducted to begin to determine significance. The bivariate relationships were compared to the total pre- and post-test scores with the concept areas that make up one's empathy score (Figure 3.3). The bivariate analysis provided a first test of the theoretical model of the study, to determine which had the greatest impact (Babbie, 1998; O'Connell, 2006). These five areas analyzed were demographics, the ability to define empathy, the ability to perceive another's emotions, the ability to understand another's emotions, and the ability to separate one's emotions from others. For the complete bivariate analysis, both significant and not significant, see the charts in Appendix E on page 145. When these initial analyses were completed, significant relationships among variables began to emerge which served as a starting point for the regression models.

In a final analysis, a series of multiple linear regression models were used to further determine which aspects of the *Activating Empathy for Undergraduate College Students (AEUGS)* curriculum had the greatest impact on overall empathy post-test scores. Each least

significant variable was removed from the linear regression analysis until only the most significant variables remained (Babbie, 1998, O'Connell, 2006).

The quantitative data was further enhanced and clarified by qualitative data collected on the post-test survey and during the running of the *AEUGS* program. These informal focus groups provided participants with the opportunity to provide details about their experiences with empathy in relation to completing the course. This data provided a richness to the quantitative data that enhanced the numerical data, as well as offering insight to areas not addressed by the survey. Used strategically, small qualitative reviews can provide important information with which to explain patterns observed in quantitative datasets (deVries et al., 1992; Seeley et al., 2008).

In all cases, either the pre-test or post-test empathy quotient score was the dependent variable. Independent variables included sociodemographic characteristics, including age, gender, and race, and the scores for the ability to define empathy, perceive emotions, the ability to understand emotions and respond to them, and the ability to separate self from others.

QUANTITATIVE DATA ANALYSIS

Frequency of Responses

All participants in the course completed the pre- and post-test. The number of participants who completed the pre-test was higher than the post-test, as 20 participants (18.0%) dropped out of the program between the pre- and post-test. These participants dropped out of the study due to several reasons including schedule issues and change in interest. Participants volunteered for the program, so they could stop attending at any time. All analyzed data is presented in Appendix E beginning on page 145.

Demographic Descriptive Statistics for All Participants

The following is a description of the age, gender, and race breakdown for all the participants in the *AEUGS*. There were 111 participants in the pre-test for this study, and 92 participants in the post-test. Table 5.1 below summarizes the breakdown of demographic characteristics, including age, gender (male/female), and race (white/non-white) for both the pre-test and post-test scores.

For this study, most participants (50.5% on the pre-test and 45.7% on the post-test) were in the 20 to 21-year-old range. The fewest number of participants (3.6% on the pre-test and 2.2% on the post-test) were in the 25 or more years old age range. The majority of participants (66.7% on the pre-test and 63.0% on the post-test) identified as female. Most participants identified as white (67.6% on the pre-test and 65.2% on the post-test). Participants could write in their race, and as such the non-white category included the following races: races Black, Middle Eastern, Indian, Asian, and Latino/Latina.

Table 5.1 Demographic Statistics

Demographic Characteristics	Percent Pre-Test (n=111)	Percent Post-Test (n=92)
Age		
18-19	29.7%	30.4%
20-21	50.5%	45.7%
22-25	16.2%	21.7%
25 or more	3.6%	2.2%
Gender (n = 111)		
Male	33.3%	37.0%
Female	66.7%	63.0%
Race (n = 111)		
White	67.6%	65.2%
Non-White	31.5%	33.7%
No Response	0.9%	1.1%

Pre- and Post- Test Scores

As shown in Table 5.2 below the pre- and post-test scores were broken down into four ranges. These ranges were developed by Baron-Cohen & Wheelwright (2004) when they created the Empathy Quotient and include:

- 0 - 32: Lower than average ability for empathetic responses;
- 33-52: Average ability for empathetic responses;
- 53-63: Above average ability for empathetic responses; and
- 64-80: Very high ability for empathetic responses.

Table 5.2 Pre-Test and Post-Test Scores for all Participants

Empathy Quotient Score (points)	0-32: Lower than average ability for empathetic responses.	33-52: Average ability for empathetic responses.	53-63: Above average ability for empathetic responses.	64-80: Very high ability for empathetic responses.	Mean	Std. Dev.
Pre-Test (n = 111)	17.1%	74.8%	6.3%	1.8%	0.93	0.551
Post-Test (n = 92)	8.7%	73.9%	15.2%	2.2%	1.11	0.564

$x^2 = 0.150$

While an increase was seen between pre-test and post-test scores, comparison showed no significance between these scores ($x^2 = 0.150$). As such, post-test scores were solely used to look for significance among the components of empathy that increase empathy levels, rather than comparing everything to pre-tests as well. In general, post-test scores were higher than pre-test scores, with the mean going from 0.93 to 1.1. Participants shifted from being below average to slightly above average with their post-test scores.

When comparing pre- and post-test scores, the greatest increase of scores developed in the 53 to 63 point range, which shows an above-average ability for empathetic responses. 6.3% of participants scored in this range on the pre-test, while 15.2% scored in this range on the post-test, which is an 8.9% increase in participants scoring in this range from pre-test to post-

test. The largest decrease was shown in those participants who scored in the 0 to 32 range, or lower than average ability for empathetic responses. On the pre-test, 17.1% of participants scored in this range, while 8.7% did on the post-test, which is an 8.4% decrease in participants scoring in this range from the pre-test to the post-test.

The 33 to 52 point range or average ability for empathetic response scores made up the majority of final scores on both the pre- and post-test and stayed generally the same percentage-wise. This category aligns with the means for both the pre- and post-tests. 74.8% scored in the 33 to 52 point range on the pre-test and 73.9% scored in this range on the post-test. Also remaining relatively stable were those in the 64 to 80 point range or showing a very high ability for empathy with 1.8% scoring in this range on the pre-test and a slight increase to 2.2% scoring in this range on the post-test.

Review of the Research Questions

Five research questions were guiding this study. They are as follows:

- RQ1: How do demographics such as age, gender, and race affect the empathy levels of participants before and after completing the AEUGS program?
- RQ2: What is the relationship between the ability to define empathy and empathy levels?
- RQ3: What is the relationship between the ability to perceive someone else's emotions and empathy levels?
- RQ4: What is the relationship between the ability to understand someone's emotions during and interaction and empathy levels?
- RQ5: What is the relationship between the ability to differentiate another's

emotions from oneself and empathy levels?

To answer research questions two, three, four, and five, questions were combined to come up with composite scores to accurately represent these variables. A complete explanation of how these scores were developed can be found in Chapter 4.

Quantitative Analysis of Research Question 1

Research question 1 in this study asked, "How do demographics such as age, gender, and race affect the empathy levels of participants before and after completing the *AEUGS* program?". To answer this question, first, bivariate analysis of the demographic data of age, gender, and race compared to pre-test and post-test scores was run. Demographics were also included as part of the regression analysis that will be discussed later in this chapter.

After a bivariate analysis of age and race with each independent variable, it was determined that demographics do not show a significant effect on the total scores on the pre- or post-tests, either of the components of the ability to perceive another's emotions or either of the components of the ability to understand another's emotions. The analyses for these variables can be found in Appendix E beginning on page 145.

In the bivariate analysis, gender does have a significant impact on test scores, but only on the component of the ability to separate one's emotions from others' emotions on and the post-test (x^2 = 0.057). What this means is that females showed a higher ability than males to separate their emotions from another's emotions, with 20.7% of females showing an above-average ability compared to 4.3% of males showing an above-average ability. See Table 5.3 below for a breakdown of this data.

Table 5.3 Comparing gender and ability to separate one's emotions from another's emotions

Gender	Below Average	Average	Above Average
Male	6.5%	26.15%	4.3%
Female	5.4%	37.0%	20.7%

$x^2 = 0.057$; $P < 0.05$

Quantitative Analysis of Research Question 2

Research question 2 in this study asked, "What is the relationship between the ability to define empathy and empathy levels?". First, a bivariate analysis comparing the composite score for defining empathy and post-test scores was run. This definition composite score was also included as part of the regression analysis that will be discussed later in this chapter. The quantitative data for the ability to define empathy did not show significance, either in the bivariate analysis or the regression analysis. What this means is that someone does not necessarily need to deeply understand or be able to define empathy in order to score well on the Empathy Quotient.

Quantitative Analysis of Research Question 3

Research question 3 in this study asked, "What is the relationship between the ability to perceive someone else's emotions and empathy levels?". To answer this question, the composite score for the variable was split into two dimensions, which were then run as separate bivariate analyses comparing each to post-test scores. Both of these dimensions scores were included as separate parts of the regression analysis that will be discussed later in this chapter.

The first dimension of the ability to perceive another's emotions that was measured is the ability to perceive masked emotions. This dimension was significant at the 0.001 level (x^2 = 0.000). The ability to perceive masked emotions has a generally positive

correlation with scores on the post-test empathy quotient. For the most part, if a participant scored in the below average, average, or above average range for the ability to perceive masked emotions, they also scored in these ranges on the post-test empathy quotient. There was a slight variance in this when 14.1% of participants scored in the above average range for this ability, and score in the average range on the post-test. Another variance shows in the lower than average empathy scores, where no one scored in the below average range for the ability to perceive hidden emotions. In other words, while the ability to perceive masked emotions usually has a positive relationship with empathy levels, it is not always the case. Table 5.4 below shows the percentage of participants who scored below average, average, and above average in each of these categories.

Table 5.4 Score for Ability to perceive masked emotions compared to total post-test scores

Total Post-Test Score **Perceive Score I**	0-32: Lower than average ability for empathetic responses.	33-52: Average ability for empathetic responses.	53-63: Above average ability for empathetic responses.	64-80: Very high ability for empathetic responses.
Below Average	0.0%	3.3%	0.0%	0.0%
Average	7.6%	56.5%	4.3%	0.0%
Above Average	1.1%	14.1%	10.9%	2.2%

$x^2 = 0.000; P < .001$

The second dimension is the ability to recognize what someone would typically be feeling in a situation. This dimension was also significant at the 0.001 level (x^2 = 0.000). The ability to recognize the emotions that someone would typically be feeling has a positive correlation with scores on the post-test empathy quotient. This means that, generally, as a participant scored higher in this ability, they also scored higher in their overall empathy post-test score. Table 5.5 below shows the percentage of participants who scored below average, average, and above average in each of these categories.

Table 5.5 Score for the ability to recognize typical emotions in a situation compared to total post-test scores

Total Post-Test Score **Perceive Score II**	0-32: Lower than average ability for empathetic responses.	33-52: Average ability for empathetic responses.	53-63: Above average ability for empathetic responses.	64-80: Very high ability for empathetic responses.
Below Average	5.4%	9.8%	0.0%	0.0%
Average	3.3%	53.3%	3.3%	0.0%
Above Average	0.0%	10.9%	12.0%	2.2%

$x^2 = 0.000; P < .001$

For the ability to recognize typical emotions in a situation, the highest number of participants (53.3%) showed an average ability to recognize typical emotions and an average score on the post-test empathy quotient. The lowest number of participants (2.2%) showed an above-average ability to recognize typical emotions in a situation and a very high ability to show empathetic responses. The general trend in the data showed that if someone scored in the above average, average, or below average range for the ability to recognize typical emotions in a situation, then they scored in similar ranges on the post-test empathy quotient.

Quantitative Analysis of Research Question 4

Research Question 4 in this study asked, "What is the relationship between the ability to understand someone's emotions during an interaction and empathy levels?". To answer this question, the composite score was split into two dimensions, which were also run as separate bivariate analyses comparing each to post-test scores. Both of these dimension's scores were included as part of the regression analysis that will be discussed later in this chapter.

The first dimension of the ability to understand someone's emotions that was measured was the ability to respond to another's emotions. This dimension was significant at the .01 level, with $x^2 = 0.007$. This dimension's results showed that, in general, a participant could score in the below average range for the ability to understand someone's emotions and still end up in the average range for their overall empathy scores. This was the main anomaly,

as otherwise people tended to score in the below average, average, and above average ranges, and score in those ranges on their overall empathy levels as well. What this means is that a participant did not necessarily have to have a strong ability to understand emotions and could still score relatively high on their ability to empathize.

For the ability to respond to another's emotions, most participants (38.0%) scored an average ability to respond to another's emotions, and a below-average ability to empathize on the post-test. The least number of participants (1.1%) scored in three different areas, including (1) an above-average ability to respond to another's emotions, correlated to a lower than average score on the empathy quotient, (2) an average ability to respond to another's emotions and a very high ability for empathy, and (3) an above-average ability to respond to another's emotions and a very high ability for empathy. Table 5.6 below show the percentage of participants who scored below average, average, and above average in each of these categories as compared to total post-test empathy quotient scores.

Table 5.6 Score for the ability to respond to another's emotions compared to total post-test scores

Total Post-Test Score **Understand Score I**	0-32: Lower than average ability for empathetic responses.	33-52: Average ability for empathetic responses.	53-63: Above average ability for empathetic responses.	64-80: Very high ability for empathetic responses.
Below Average	5.4%	38.0%	4.3%	0.0%
Average	2.2%	29.3%	3.3%	1.1%
Above Average	1.1%	6.5%	7.6%	1.1%

$x^2 = 0.007$; $P < .01$

The second dimension is the ability to understand how someone feels in an interaction. This dimension was significant at the 0.001 level, with $x^2 = 0.000$. The ability to understand how someone feels during interaction has a positive correlation with scores on the post-test empathy quotient. Therefore, as someone's ability to understand how someone feels during an interaction increases, their ability to empathize typically increases as well. Table 5.7 below

show the percentage of participants who scored below average, average, and above average in each of these categories as compared to total post-test empathy quotient scores.

Table 5.7 Score for the ability to understand how someone feels during an interaction compared to total post-test scores

Total Post-Test Score **Understand Score II**	0-32: Lower than average ability for empathetic responses.	33-52: Average ability for empathetic responses.	53-63: Above average ability for empathetic responses.	64-80: Very high ability for empathetic responses.
Below Average	4.3%	5.4%	0.0%	0.0%
Average	2.2%	45.7%	1.1%	0.0%
Above Average	2.2%	22.8%	14.1%	2.2%

$x^2 = 0.000$; $P < .001$

The dimension of understanding how someone feels during an interaction showed the most participants (45.7%) with an average ability to understand how someone feels and an average post-test empathy quotient score. The lowest percent of participants (1.1%) scored in the range of average ability for understanding how someone feels during an interaction and above-average ability for empathetic responses. The general trend in the data showed that if someone scored in the above average, average, or below average range for the ability to understand how someone feels during an interaction, then they scored in similar ranges on the post-test empathy quotient.

Quantitative Analysis of Research Question 5

Research Question 5 in this study asked, "What is the relationship between the ability to differentiate another's emotions from oneself and empathy levels?". To answer this question, first, bivariate analysis of the composite score for the ability to differentiate another's emotions from oneself compared to the post-test empathy quotient scores was run. This variable was also included as part of the regression analysis that will be discussed later in this chapter.

The ability to separate another's emotions from one's own has a significant impact at the .01 level on the post-test empathy quotient score of participants (x^2 = 0.006). Over half of the participants (51.1%) scored an average ability to differentiate their emotions from another's emotions and an average ability to empathize as shown by their empathy quotient score. The least percent of participants (1.1%) scored an above-average ability to separate their emotions from another's emotions and a lower than average ability for empathetic responses. In general, the trends in this variables data show that if someone has an average ability to separate their emotions from another's emotions, they will likely score in the average range on the empathy quotient post-test. If they score in the below-average or above-average range, however, their empathy quotient score is less predictable. What this means is that an above average ability to differentiate self from other does not always correlate with the above average ability to empathize. See Table 5.8 below for a breakdown of this data.

Table 5.8 Score for the ability to differentiate oneself from others compared to total post-test scores

Total Score **Differentiate Score**	0-32: Lower than average ability for empathetic responses.	33-52: Average ability for empathetic responses.	53-63: Above average ability for empathetic responses.	64-80: Very high ability for empathetic responses.
Below Average	3.3%	8.7%	0.0%	0.0%
Average	4.3%	51.1%	7.6%	0.0%
Above Average	1.1%	14.1%	7.6%	2.2%

x^2 = 0.006; *P < .01*

Following these individual item analyses, a correlation of all independent variables and the dependent variable was conducted. This served to further explore bivariate relationships between independent variables and post-test empathy quotient scores, as well as to identify any multicollinearity that might exist within the overall model. Upon review of the correlation matrix, it was found that multicollinearity did not exist. This final stage of the bivariate analysis set the stage for more advanced multivariate analysis.

Multivariate Analysis

After conducting the bivariate analysis, it was determined that a multivariate analysis would help to distill which variables had the greatest impact on overall empathy scores. Multivariate analyses help to describe why a trend occurred in the data (Babbie, 2015). This analysis would also allow for the separation of interrelated variables such as the ones used in this study and determine their individual effects on the dependent variable (Blalock, 1979). As such, a linear regression analysis was used to determine which of the four independent variables in this study had a significant effect on the total post-test scores.

A six-step model was used in which variable groupings based on the four independent variables were introduced individually, and finally all together to determine significance. The first model focused on the demographic variables of age, gender, and race. The second model focused on the ability to define empathy. The third model was the ability to perceive another's emotions and included the concepts of the ability to perceive hidden emotions and the ability to perceive typical emotions in a situation. The fourth model looked at the ability to understand another's emotions, focusing on the two concepts of understanding which include the ability to respond to another's emotions and the ability to understand emotions in an interaction. The fifth regression model focused on the ability to separate one's emotions from another's emotions. The sixth model considered all independent variables together, allowing for the most significant to show. The final model was reduced, both manually and using the stepwise function of SPSS, with non-significant variables deleted until the most significant independent variables were all that remained.

Without the final reduced model at the end, it would be challenging to tell which variable had the greatest significance, as all of the varying levels of significance can make the

most significant variables hard to recognize. Putting all of these variables together in one regression model allowed for a more holistic view of what was going on in the data. It allowed relationships among the variables and the relationship of each variable to the post-test empathy quotient score to push out by level of significance, allowing only the most significant to remain in the end. Reducing the model manually also helped with the limited population of the study (n = 92). Table 5.9 below shows these models, their relationships, and their significance, and descriptions of the data follows.

Table 5.9 Comparison of Five Multivariate Models on Components of Empathy Education

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Reduced Model**
	-- Standardized Regression Coefficients --						
Demographic Variables							
Age	-0.041					0.046	
Gender (females=1)	**0.230****					0.064	
Race (nonwhite = 1)	-0.062					-0.109	
Define Empathy		-0.407				-0.047	
Perceiving Emotions							
Ability to perceive hidden emotions			**0.216****			0.130	
Perceive typical emotions			**0.508*****			**0.391*****	**0.398*****
Understanding Emotions							
Ability to respond to another's emotions				**0.248*****		**0.211****	**0.234*****
Ability to understand emotions in an interaction				**0.438*****		0.138	**0.181****
Differentiating Self and Other							
Ability to differentiate one's emotions from another's					**0.382*****	**0.228*****	**0.261*****
R^2 Adjusted	0.024	-0.011	0.373	0.273	0.136	0.472	0.472
F value	1.745	0.004	**28.08*****	**18.11*****	**15.37*****	**9.93*****	**1.09*****
Cases	90	91	91	91	91	90	90

* significant at the .05 level ** significant at the .01 level *** significant at the .001 level

When considering the demographic variables of age, gender, and race, only gender showed significance at the 0.01 level (Model 1). The coefficient for age decreased, meaning that as age increases, post-test scores decreased. The gender relationship showed that females were likely to show higher post-test scores than males. The race relationship showed that non-whites were likely to show a higher post-test score than whites. Overall, demographics accounted for 2.4% or the variance in the post-test scores (Adjusted R^2=0.024). The data about gender matched with the bivariate analysis, where gender was shown to be significant in someone's ability to separate their emotions from another's emotions. What this means is that gender shows some significance in its effect on the post-test score, but likely only in its effect on the ability to separate oneself from another. Gender and all other demographics, however, do not remain significant when compared to all the other variables.

The ability to define empathy was the next variable in the regression model (Model 2). This variable did not show significance by itself or when compared to all other variables, even in the reduced model. The coefficient decreased, meaning that as the ability to define empathy increases, post-test empathy quotient scores would decrease. Overall, this variable made up a negative amount of the post-test scores.

The ability to perceive another's emotions was tested next (Model 3). While both concepts were considered significant, the ability to perceive hidden emotions was significant at the 0.01 level and the ability to perceive typical emotions in a situation was more significant at the 0.001 level. For every 1-point increase in score for ability to perceive hidden emotions, there was a 0.215 point increase in post-test score. For every 1-point increase in the ability to perceive typical emotions in a situation, there was a 0.508 point increase in total post-test score. This variable accounted for 37.3% of variance in post test scores (Adjusted R^2=0.373).

The next test, the ability to understand another's emotions (Model 4). There were two concepts for this variable as well, and both were significant at the 0.001 level. For every 1-point increase in score for ability to respond to another's emotions, there was a 0.248 point increase in post-test score. For every 1-point increase in score for ability to respond to another's emotions, there was a 0.438 point increase in post-test score. This variable accounted for 27.3% of variance in post test scores (Adjusted R^2=0.273).

The final single variable that was tested was the ability to separate one's emotions from another's emotions (Model 5). This variable was shown to be significant at the 0.001 level, and for every 1-point increase in score for ability to differentiate own emotions from another's there was a 0.382 point increase in total test scores. This variable accounted for 13.6% of the variance in post-test scores (Adjusted R^2=0.136).

In order to compare the significance of all the variables, they were included in an overall model (Model 6) without deletion by significance. In this model, the independent variables of the ability to perceive typical emotions in a situation, ability to respond to another's emotions, and ability to differentiate one's emotions from another's emotions were shown to be significant at the 0.001 level. These three variables accounted for 47.2% of variance in the overall post-test scores (Adjusted R^2=0.472).

Finally, in the reduced model, four variables that are significant at the 0.001 level rose to the top, including the ability to perceive typical emotions in a situation, ability to respond to another's emotions, the ability to understand emotions in an interaction, and the ability to differentiate one's emotions from another's emotions. These three variables accounted for 47.2% of the variance of the overall post-test scores (Adjusted R^2=0.472).

QUALITATIVE DATA ANALYSIS

There were two forms of qualitative data collected to enhance the quantitative data results. The first was from two short answer questions on the post-test survey. The second was informal focus group discussions held with each cohort on the last day of their program. There were two short answer questions included on the survey that addressed this research question as well. These questions were reviewed for common themes in their responses.

Survey Short Answer Questions

The first question, Question 69 on the post-test, was, "Define empathy in one or two sentences." There were 92 responses to this question on the post-test survey. Five main themes emerged from the data. To uncover these themes, the post-test surveys were printed, and each response was read using the theoretical lens outlined in Chapter 3. The common themes were counted for how many times they showed up across the responses, and definite consistencies and patterns emerged from the words. See Table 5.10 below for a breakdown of these themes and the number and percent of responders to each theme.

Table 5.10 Themes and Number of Participants for Survey Question 69

Theme	Number of Participants with this Theme in their Response	Percent of Participants with this Theme in their Response	Sample Quote regarding this theme, from the Data
Seeing another's perspective	90	97.8%	The ability to put yourself in another's shoes and see things from their perspective.
Separating yourself from another	87	94.6%	It's about getting outside of yourself and your experiences and thinking about hov someone else is experiencing their lives.
Feeling another's emotions	40	43.4%	Empathy is experiencing someone else's emotions and feeling their current situation.
Understanding another's emotions	31	33.7%	Empathy is understanding and connecting to another's emotions and experiences.
Responding to another's emotions effectively	12	13.0%	The ability to understand the experiences of others and applying that to the way you interact with them.

The second question, Question 70 on the post-test, was, “Explain a situation where you observed someone (it could be yourself) being empathetic.” There were three main themes that emerged from the answers to this question. See figure 5.11 below for a breakdown of these themes and the number of participants who included the themes in their responses.

Table 5.11 Themes and Number of Participants for Survey Question 70

Theme	Number of Participants with this Theme in their Response	Percent of Participants with this Theme in their Response	Sample Quote regarding this theme, from the Data
Listening and talking someone through a hardship	45	48.9%	When my friend was being hard on himself for not doing too well in school. I talked to him and told him about the issues I’ve had in the past and tried to make him feel more comfortable about his situation.
Considering another’s perspective	31	33.7%	I am empathic when I disagree with someone, but try to look from their viewpoint as to why they have that opinion.
Watching a mentor be empathetic	13	14.1%	I saw my philosophy professor being empathetic towards a student that was sick in class. She came to class asking if she could leave a few minutes early because she didn't feel well and he was unbelievably understanding.

Out of 92 post-test participants, two (2.2%) responded that empathy was simply giving someone a hug when they were in a bad situation.

Informal Focus Groups

The informal in-class group discussions were guided by the following questions:

- What is empathy?
- Have you noticed more empathy in your life now that you have taken this course?
    - Can you explain why or why not?

- Do you find yourself being more or less empathetic since completing this course?
- What was your favorite part of the course?

Similar themes emerged from these questions when compared to the short answer questions on the survey.

The question, “What is empathy”, was asked to the entire group of each Cohort. The researcher was asking participants to share their definitions and try to come to a class consensus. The main themes that emerged included that empathy is (a) taking the perspective of another, (b) feeling their emotions, and (c) reacting or responding appropriately to those emotions. Some notable quotes, put into complete sentences by the researcher, from this discussion include the following:

- Empathy is…
    - the ability to have understanding and compassion towards the other and to be able to see the same situation from their perspective. (Cohort 1)
    - connecting with others’ emotions and attempting to understand them within yourself. (Cohort 1)
    - being able to feel with someone even when you have no idea what they are possibly going through. (Cohort 2)
    - being non-judgmental and truly trying to put yourself in another person's shoes. (Cohort 3)
    - being there for someone and actively listening. (Cohort 3)
    - the ability to connect with others’ emotions and feel it with them. (Cohort 3)
    - the ability to understand someone and their emotions (Cohort 4)

- not just listening to others but responding in a caring and appropriate manner. (Cohort 4)
- understanding what someone is going through and offer the comfort and sympathy that works for them and their situation. (Cohort 5)

When asked if they are noticing more empathy in their lives upon completing the course, most participants responded that they are noticing empathy and empathetic responses around them. Some gave examples of these empathy experiences, including the following quotes, turned into complete sentences by the researcher:

- I saw millions of people gather on social media and feel for the French after Notre Dame caught fire. (Cohort 1)
- The person next to me in my stat class was having a bad day, and she dropped her clicker and when I picked it up to give back to her, she was almost crying, so I talked with her a little to just see what was wrong and just to understand. (Cohort 1)
- My sister trying to understand my point of view in an argument. (Cohort 2)
- Every single day people are being empathetic, it's a matter of noticing it and acknowledging it. (Cohort 3)
- My friend was upset after a public speaking situation which was due to nerves, and I saw people console her after and help her feel better. (Cohort 4)
- Sometimes I now notice empathy and lack of empathy on TV Shows. (Cohort 5)

Most participants felt as though they are being more empathetic in their daily lives since completing *Activating Empathy for Undergraduate College Students.* Overall, they feel

as though they are giving people the benefit of the doubt in situations and attempting to take the other person's perspective before responding with their own perspective. Here are some notable quotes from the various cohorts that exemplifies these themes. These quotes were turned into complete sentences by the researcher.

- I talked to a coworker whom I do not really get along with, when she remarked that nobody at work likes her. It benefited our relationship when I listened and saw how she felt about the whole situation. (Cohort 1)
- When a friend got into her first choice of graduate school, I was genuinely happy for her. I could feel through her emotions what that experience would be like for me; even though I had not been accepted to my program yet and could just have easily been jealous. (Cohort 1)
- I tried to understand how stressful it was for my girlfriend to get into medical school and study all the time and how tough it could be. (Cohort 1)
- I am actively thinking about empathy and the ways in which it influences life, laws and relationships. (Cohort 2)
- Sometimes, I get upset at someone else for something, but I remember that sometimes I may not be in the best situation and react well because of that. I try to live my life by being understanding for others because I have no idea what they might be going through. Instead of judging, try to understand. (Cohort 2)
- This past week my boyfriend did me a favor a few days later than I had expected him to. When he told me that he was upset because I never said thank you, my initial reaction was to lash out and tell him that he was late helping me. Instead, I took a

moment and thought about sometimes when I felt underappreciated and apologized. (Cohort 3)

- During an argument with a friend, I never really understood why he did or said the things he did. But after cooling off for a bit and thinking about the entire situation, I realized why he felt the way that he did from his perspective and I have been more at peace between the things that happened between us. (Cohort 4)

Finally, the cohorts were asked for their favorite part of the *Activating Empathy for Undergraduate College Students* course. The themes that emerged from this question included (a) making connections with peers with similar interests but who still have different perspectives, (b) the engaging activities that were not just theoretical, and (c) feeling part of a safe space to share, especially in a place as big as Penn State University. Some notable quotes from this question, put into complete sentences, include:

- Interacting and meeting new people. It helps to listen and learn about others' opinions and beliefs. It can be very beneficial and help with self-reflection. (Cohort 1)
- The activities we did in class. It helps me realize the importance of being empathetic and the issues that's really going around the world. (Cohort 1)
- Meeting new people and learning new perspectives while growing together. (Cohort 1)
- In a place that can sometimes feel a little big, it's nice to know that other people around me feel the same way. (Cohort 1)
- I loved it and this should be at all college campuses! (Cohort 1)
- The open conversations and the practical aspect of many of the activities. It wasn't all theoretical and we worked on making specific responses to issues. (Cohort 2)
- I loved creating new connections with everyone in class and be able to hear

others' perspectives on their experiences. I thought it was so easy to share with everyone and feel so comfortable in such a short period of time. (Cohort 2)

- Talking as a class about controversial issues/topics that came up and listening to other people's perspectives. (Cohort 3)
- It is a safe space and I feel I got to take different perspectives and dive deeper into what empathy means. (Cohort 3)
- I enjoyed how diverse the participants were, and I might not have met others who are so diverse in an everyday setting. (Cohort 4)

Overall, reactions to the course were positive and results in addition to increases in empathy scores were seen in each cohort.

SUMMARY

The analysis presented in this chapter was used to explore the theoretical model and research questions for this study. The findings in the overall regression model (Table 5.9) indicate that the most important parts of an empathy education program are the ability to perceive typical emotions in a situation, the ability to respond to another's emotions, the ability to understand emotions in an interaction, and the ability to differentiate one's emotions from another's emotions. This was also supported by the bivariate analyses. There is really no comparable previous research in empathy education that investigates these components specifically, but research in the fields of psychology and neurology, as well as some social and emotional education supports these findings. In Chapter 6, these findings are interpreted and explored, and suggestions for how they can be applied to future empathy education programs will be discussed.

CHAPTER VI

SUMMARY, FUTURE PROGRAM RECOMMENDATIONS, AND CONCLUSION

This exploratory study was designed to determine which components of an empathy curriculum designed for participants aged 18 to 25 were most effective in increasing empathy levels of participants. The program used as part of the study was researcher designed and called *Activating Empathy for Undergraduate College Students (AEUGS).* This is an original program that exists in the understudied area of research into effective empathy education

programs. The research study was designed to explore components that influenced participant empathy scores the most. Then these components could be used to create future empathy education courses. The study builds on the knowledge of recent research in this area completed at NUI Galway and other places around the world through UNESCO Chairs who specialize in youth and community development.

There were 92 undergraduate student participants from the Pennsylvania State University who completed this study. This population was chosen because it is underserved, in that there are not many, if any, empathy education programs designed for young adults aged 18 to 25. The researchers were curious how an empathy education program would work for this age range and in the United States. Both quantitative and qualitative data were collected at the beginning and end of the study. This data helped to answer the five research questions and determine what types of activities should be included in an empathy education program for participants aged 18 to 25, as well as what the program design should look like to be the most effective.

The findings in this study show which components of *AEUGS* had the most impact on participant empathy scores, using the Empathy Quotient as the scale to measure empathy levels (Baron-Cohen & Wheelwright, 2004). The components of *AEUGS* were formed from a systematic literature review of the definition of the concept of empathy and formed the independent variables for this study. Each of these components has associated activities that could be used to enhance empathy. Each variable and its significance to empathy levels will be explored individually, and then suggestions will be made for how to incorporate these components into an effective empathy education curriculum for young adults. The first variable

that was examined included three demographic characteristics, which are age, gender, and race.

RQ1: How do demographics such as age, gender, and race affect the empathy levels of participants before and after completing the AEUGS program?

For this question, Empathy Quotient scores were calculated for the post-tests and then compared across the demographic information gathered from the participants on the pre-test and post-test. In general, demographics were not found to be significant across any measures. In the individual demographics regression model (Model 1), only gender showed significance, and at the 0.01 level (Table 5.9). Demographics accounted for a small portion, or 2.4%, of the variance in post-test empathy quotient scores (Adjusted $R^2 = 0.024$).

The most significant impact of gender could be seen in the ability of participants to separate their emotions from someone else's emotions. Females showed a higher ability than males in their ability to separate their emotions from another's emotions, with 20.7% of females showing an above-average ability compared to 4.3% of males showing an above-average ability (Table 5.3). As this separation variable proved very significant in both the bivariate and regression analysis, it would follow that since gender influenced that ability it would also be significant, but a closer look at this difference could be a good topic for future studies on gender and empathy levels.

The significance of gender is somewhat consistent with previous studies, where men have been found to exhibit less empathy than women, but if anything gender was expected to show a greater significance than it did (Christov-Moore et al., 2014; Cohn, 1991; Eisenberg and Lennon, 1983; Feingold, 1994; Hall, 1978, 1984; Hoffman, 1977; Matsangidou et al.,

2018; O'Brien et al., 2012; Rueckert & Naybar, 2008; Silke et al., 2019; Thompson and Voyer, 2014). Perhaps the concept that females are better at separating their emotions from another's emotions is something that should be closely examined as a reason for gender discrepancies in empathy levels.

For the demographic components of age and race, the findings were that neither has a significant impact on participant empathy levels. This is consistent with prior research findings which in general were inconclusive about age and race affecting empathy (Beadle & de la Vega, 2019; Beadle et al., 2013; Grühn et al., 2008; Matsangidou et al, 2018; Sessa et al, 2014; Soto & Levenson, 2009).

These demographic findings in relation to empathy scores can help to drive decisions about future empathy education programs. *AEUGS* includes a variety of ages, genders, and races in the activities and scenarios used in the program. This should be continued so that everyone feels included in the messages of the program. Further suggestions for application are found later in the recommendations section of this chapter.

RQ2: What is the relationship between the ability to define empathy and empathy levels?

For this question, the composite score for the ability to define empathy was compared to post-test Empathy Quotient scores from the post-test survey. The ability to define empathy was not significant in the regression model nor the bivariate measurements. In fact, the ability to define empathy had a negative Adjusted R^2 when matched with post-test scores for the Empathy Quotient (Adjusted R^2 = -0.011). This is unusual and may reflect how this variable was measured, or the small sample size. The variable showed a negative correlation, where for each one point scored in the ability to define empathy, total empathy quotient scores decreased

by 0.407 points. The researchers have some concerns about this variable and how the measurement was formed. This is a newly developed way to measure this variable and will need further operationalization and refinement.

Previous research into how the ability to define empathy specifically was hard to find. In general, it seems the consensus was that a participant needs to have at least a basic understanding of empathy, as it is a complex topic with many repercussions for use Decety, 2011; Caprara et al., 2000; Eisenberg et al., 2006; Feshbach & Feshbach, 2011; Saarni, 1990; Wentzel, 1993; Hoffman, 1977; Toi & Batson, 1982). Question 69 on the pre-test and post-test surveys was, "Define empathy in one or two sentences." Based on the qualitative data from this question, most of the participants understood a basic idea of empathy. Participants understood that empathizing with someone includes, seeing another's perspective, separating yourself from another, feeling another's emotions, understanding another's emotions, responding to another's emotions effectively, and dedicating your focus to someone (Table 5.10). The use of these terms demonstrates that participants had a basic understanding of the concept of empathy. The qualitative data on this variable seems to be more valuable than the quantitative data, but overall the data combined with the non-significance of this variable, shows that perhaps a basic understanding of empathy is all that is needed in order to practice it.

The implications of this finding are that empathy education programs can focus less on defining empathy and more on other aspects of the course. Establishing a basic definition of empathy at the beginning will allow everyone to be on the same page moving forward in the course, but spending more time defining the intricacies of empathy will not increase empathy levels of participants.

RQ3: What is the relationship between the ability to perceive someone else's emotions and empathy levels?

For this question, the composite scores for two dimensions of the ability to perceive empathy were calculated: the ability to perceive emotions that might not be clearly expressed, or masked emotions, and the ability to perceive typical emotions in common situations. Previous research in this topic showed that the ability to perceive emotions is an innate ability born in healthy human infants, and thus it provides the foundation for future empathetic behaviors (Coplan, 2011; Decety and Moriguichi, 2007; Hoffman, 1984; Kohut, 1982).

Of the two dimensions for this variable, the ability to perceive typical emotions in a situation is the most significant (Table 5.9). For every point increase in the composite score for the ability to perceive typical emotions in a situation, total Empathy Quotient scores increased by 0.508 points, or a positive correlation. These increases show the importance of perceiving emotions is in relation to the ability to empathize.

The importance of the ability to perceive emotions was also expressed in the qualitative data from participants. The following are a few quotes that demonstrate this component:

- I talked to a coworker whom I do not really get along with, when she remarked that nobody at work likes her. It benefited our relationship when I listened and saw how she felt about the whole situation. (Cohort 1)
- This past week my boyfriend did me a favor a few days later than I had expected him to. When he told me that he was upset because I never said thank you, my initial reaction was to lash out and tell him that he was late helping me. Instead, I took a moment and thought about sometimes when I felt underappreciated and apologized. (Cohort 3)

- My friend was upset after a public speaking situation which was due to nerves, and I saw people console her after and help her feel better. (Cohort 4)

These findings are supported by previous research. The ability to perceive the emotions someone is feeling is a basic component of an empathetic response (Coplan, 2011; Decety and Moriguichi, 2007; Hoffman, 1984; Kohut, 1982). Practice recognizing emotions and reflecting on how someone may feel in a situation is an important aspect of the ability to empathize and should be included in empathy education courses. Once someone has this innate ability honed to a skill, then they can build on empathy in other ways, such as the rest of the variables discussed in this study.

RQ4: What is the relationship between the ability to understand someone's emotions during and interaction and empathy levels?

The ability to understand someone's emotions was also split into two dimensions, each with composite scores that were compared to the post-test Empathy Quotient scores. Both dimensions were shown to have a significant impact on empathy levels.

The first dimension was the ability to understand someone's emotions enough to respond to them appropriately. For every one-point increase in this category, participant post-test Empathy Quotient scores would increase by 0.248 points. The second category was the ability to understand how someone feels during an interaction. For every one-point increase in

this category, post-test empathy scores increased by 0.438 points. In the bivariate analysis, both of these categories were found to be significant. These two categories make up the ability to understand emotions, which makes up 27.3% of total Empathy Quotient post-test scores (Adjusted $R^2 = 0.273$). Both of these categories of this variable were seen to be significant when compared to all other variables in the reduced regression model, but at different levels. The ability to respond to another's emotions was significant at the 0.001 level and the ability to understand emotions in an interaction was significant at the 0.01 level. While both significant, the ability to respond to another's emotions seems slightly more significant to someone's empathy levels.

The results for this question also came through in the qualitative responses. 33.7% of participants stated on the final survey that empathy included understanding someone's emotions and 13% stated that an empathetic response included responding appropriately to another's emotions. In the group discussions at the end of each session, these themes were restated many times, where participants made a point of emphasizing that recognizing someone is having an emotional response is only the first step. The empathizer must try to understand what the other person is feeling in order to have an effective empathetic response. Some quotes to support this include:

- I tried to understand how stressful it was for my girlfriend to get into medical school and study all the time and how tough it could be. (Cohort 1)
- The person next to me in my stat class was having a bad day, and she dropped her clicker and when I picked it up to give back to her, she was almost crying, so I talked with her a little to just see what was wrong and just to understand. (Cohort 1)
- Sometimes, I get upset at someone else for something, but I remember that sometimes

I may not be in the best situation and react well because of that. I try to live my life by being understanding for others because I have no idea what they might be going through. Instead of judging, try to understand. (Cohort 2)

- During an argument with a friend, I never really understood why he did or said the things he did. But after cooling off for a bit and thinking about the entire situation, I realized why he felt the way that he did from his perspective and I have been more at peace between the things that happened between us. (Cohort 4)

These qualitative data support the quantitative findings that, in order to be empathetic, a person has to go a step further and understand why someone is feeling an emotion, then respond to it in effective ways. The theme of understanding shines through the qualitative results as a significant component of being an empathetic individual.

The high significance of this variable supports previous research that shows that understanding someone's emotions is important when trying to empathize with them (Coplan, 2011; Decety and Moriguichi, 2007; Hoffman, 1984; Kohut, 1982). When someone understands another's emotions they are able to respond to them appropriately, which forms the basis for an empathetic reaction (Juckel et al., 2018). This topic should be included to a large extent in future empathy education programs.

RQ5: What is the relationship between the ability to differentiate another's emotions from oneself and empathy levels?

This variable was found to be highly significant across all measures of analysis. To calculate the significance, the composite score for the ability to differentiate one's emotions

from another's emotions was compared through bivariate analysis and regression analysis to post-test Empathy Quotient scores. This component made up 13.6% of total variance in final Empathy Quotient scores (Adjusted $R^2 = 0.136$). For every one-point increase in the ability to differentiate self from other, the ability to empathize increases by 0.382 points. This variable was significant at the 0.001 level in the reduced regression model.

The results for this question were also supported by the qualitative findings of this research study. Many participants pointed out that when they are being empathetic, they are recognizing the emotions of another person. They understood these emotions were not always what they might be feeling in a situation, and so they needed to be separated and understood as a response for the other person.

This finding is supported by previous research findings, which show that one needs to be able to recognize someone's emotions are not their own (Coplan, 2011; Decety & Moriguichi, 2007). This component should be included in future empathy education courses to increase empathy levels of participants.

Summary of the Findings

In summary, there were four independent variables in this study that had a significant effect on final empathy post-test scores, when compared to all other factors. These were (1) the ability to perceive typical emotions in a situation; (2) the ability to respond appropriately to someone else's emotions; (3) the ability to understand emotions in an interaction; and (4) the ability to separate one's emotions from another's emotions (Table 5.9). These four variables accounted for 47.2% of the variance in post-test scores (Adjusted $R^2 = 0.472$). Each of these research findings provide a basis for understanding how to teach and learn empathy. If someone wants to increase empathy levels in people aged 18 to 25, they need to focus on

these four areas. This is important information to use when developing empathy education programs as well as when looking to increase empathy levels of this population for any reason. What follows are suggestions for how to use this data to improve empathy education.

SUGGESTIONS FOR INCREASING EMPATHY LEVELS

Throughout the course of this research, the objective was to learn which components of an empathy education course had the most significant influence on empathy levels of participants. The goal was to use these findings to provide best practices for future empathy education designed for undergraduate college students, such as *Activating Empathy for Undergraduate College Students (AEUGS)*. According to the results of this study, the most significant aspects of the course, and the components of empathy that have the greatest influence on empathy levels, included (1) the ability to perceive typical emotions in a situation; (2) the ability to respond appropriately to someone else's emotions; (3) the ability to understand emotions in an interaction; and (4) the ability to separate one's emotions from another's emotions (Table 5.9). There are ways to enhance each of these areas, including lessons and activities that will provide students the opportunity to increase their learning opportunities whether they signed up for an empathy education program or someone is seeking to increase empathy levels in everyday life.

Perceiving Emotions

First, the ability to perceive typical emotions in a situation has a significant effect on increasing overall empathy levels. In any situation, a human being who has undergone healthy neurological development will display emotions typical to a situation. Having the skill of being

able to walk into a situation and assess what emotions might be happening are important for assessing what actions are required to mitigate the situation. For example, if someone earns a promotion at work, they will usually feel happy and proud at their accomplishments. While emotions are not always straightforward, such as the cascade of emotions one may feel around the loss of a loved one, there are generally typical emotions that can be applied to common human situations. If someone is able to understand these typical emotions, he or she will show increases in empathy levels according to this study. There are a few activities that can be used to enhance this ability.

The first activity is a game of emotion charades. In this activity, participants come to the front of the room and act out emotions they pre-select on a card. This activity allows people to demonstrate typical emotional responses, such as a smile when elated or a furrowed brow when angry. The audience gains practice recognizing how someone who is "angry" or "elated" might show those emotions using only nonverbal cues.

Another activity suggestion is an online quiz from The Greater Good at Berkeley, or something similar. While taking the quiz, a participant observes a variety of emotions expressed in photographs and must select which emotion is being expressed. The quiz then breaks down which parts of the expression of each person shows the emotion, teaching what to look for in facial expressions and body language when trying to perceive emotions. Participants get a score at the end of the quiz, which they bring to class and discuss the results as a group. This quiz, or an activity like it, provides practice with recognizing emotions and how they are expressed.

Another way to practice perceiving typical emotions includes case study type activities. In these activities, participants read about a situation someone is in and imagine how they

might feel in that situation. For example, if given a picture of a child being bullied, they may choose to imagine the emotions of the child or the person doing the bullying. If shown a picture of a refugee landing in a boat on a foreign shore, they could imagine the emotions of the refugee or someone who is native to where the refugees are landing. In this way, participants are called to imagine what a situation would be like even if it is a situation they have not personally been in before. These suggested activities are examples of what could be used to increase empathy levels by allowing for practice in perceiving typical emotions in a situation.

Understanding Emotions

The second and third variables of the study that were shown to be significant in this study were the ability to understand someone's emotions in order to respond appropriately and understanding how someone feels during an interaction. Once someone's emotions are perceived, it is important to understand how these emotions feel and then also understand what reactions will help in this situation. For example, if a child comes home from school, upset because they were left out of a game during recess, an empathetic parent will respond in a manner where the child feels heard and can brainstorm some solutions for if the situation occurs again. A less empathetic parent might say, "well, all kids go through these kinds of things, so you have to learn to adjust." There are a few activities that allow for practicing the ability to understand another's emotions that could be used to enhance empathy levels.

The first activity suggestion is one where participants read a situation and act it out in two ways in front of a group. For the first time, they act it out with a non-empathetic reaction. For example, one of the scenarios involves a worker asking for a raise from a boss whose company is under financial stress. The worker has a family and concern about their welfare is

what causes the employee to ask for the raise. In the less empathetic reaction version, the group might show the boss firing the employee for even asking for a raise, and the employee might not understand that the company is under financial stress and keep insisting they need the raise. For the second telling of the story, the actors show empathetic reactions. In this version, the employee and the boss always come to an understanding that the boss is looking out for the best interests of the company and the employee, and they leave on agreeable terms. This activity demonstrates how an understanding of how someone feels can diffuse even the tensest situations. Even though participants are acting, they often say that the empathetic response feels so much more comfortable and all parties leave satisfied with the results. This activity is a great way to understand the emotions of a high stakes' situation, and practice how to respond in empathetic ways.

Another activity suggestion is called "The Human Face". In this activity, the class is divided into groups, and each group is given a modern scenario of a big event. The event might be based on true events or might not. The participants are instructed to think of a person who is living in this situation and describe them physically, mentally, and emotionally in great detail. During the class discussion, the group talks about their person and what could be done to mitigate their situation. This activity is a powerful look at understanding how someone feels during an event in their life, realized that actual humans are living in many situations one hears about on the news, and then considering how to empathize and provide social support for people who are suffering.

A final activity suggestion is a study of empathy mentors. Participants would be instructed to find someone, historical or modern, who they feel is the epitome of an empathic

person. They would report back to the class about this person, detailing the person's life and why he or she is an empathy role model.

Separating Another's Emotions from One's Own

The fourth significant variable in this study that should be included in future empathy education programs is practice separating someone else's emotions from one's own. Just because someone feels a certain way about a situation does not mean that everyone in that situation feels the same way. It is important, and part of healthy human development, that someone is able to recognize separate emotions in a situation, and not get wrapped up in another's emotions that are not necessarily one's own.

One way to practice this is to provide activities that allow the opportunity to look at a situation from multiple perspectives. In this way, participants become aware that a range of emotions can exist in a situation and not everyone will feel the same way. One way to do this is through a discussion of current events and who these current events are affecting and in what ways. For example, during Cohort 1 of this study, the Notre Dame Cathedral in Paris burned. In this cohort there were students from all religious backgrounds, regions of the world, and colleges at the university. The discussion around the burning of the cathedral brought up many different perspectives, including one participant who was raised in the Catholic faith and felt deep distress over the cathedral burning, while another participant did not know what the cathedral was. During any discussion about different emotions it is also important to make note of how everyone feels differently, to highlight that even when someone feels differently than oneself, empathy can bridge the differences.

In addition to discussions, another activity that practices this skill would be to present a common scenario and have pairs of students discuss how they would feel in the situation. The participants can then share with the class if they felt the same way or different as their partner. Then, lead a discussion about how and why they would feel the same or different as someone else, even under the same conditions. If the entire class would feel the same way, this can lead to a discussion about even if two people feel happy, they might express and feel happiness in different ways. Participants can practice the idea that their emotions are separate from someone else's emotions.

Final Thoughts about Presenting the Most Effective Curriculum Session

There are two final thoughts about the effectiveness of the curriculum. The first thought is that the facilitator must be chosen and trained carefully. The facilitator is key in the success of the program as they create the learning environment, which will be discussed in greater detail below. While traits such as openness, empathy, good conversation skills, responsibility, and thoughtfulness are important to look for when finding a facilitator, a strong facilitator training can help create effective facilitators. This is an area for future research, where a training program for facilitators is designed and tested for effectiveness. Until more evidence is gathered, spending time with facilitators before they present the program and making sure they understand the curriculum thoroughly and have some training in team building and conversation facilitation will help create the environment needed.

The second thought is that in any time empathy is being taught, the facilitator must establish a safe environment for learning and sharing. There are some growing pains associated with learning how to be empathetic. Creating a safe space to discuss all of these differing

emotions is critical to the success of an empathy education course, and something that the participants called out in their qualitative responses. Here are some examples from the qualitative data that highlight the importance of a safe environment:

- I loved creating new connections with everyone in class and to be able to hear others perspectives on their experiences. I thought it was so easy to share with everyone and feel so comfortable in such a short period of time. (Cohort 2)
- It is a safe space and I feel I got to take different perspectives and dive deeper into what empathy means. (Cohort 3)
- I enjoyed how diverse the participants were, and I might not have met others who are so diverse in an everyday setting. (Cohort 4).

Allowing participants the opportunity for true honesty is of utmost importance to the success of empathy education, for both participants and the facilitator. The facilitator learns along with the students in a course like this, so needs to be open-minded, honest, and willing to get deep and personal very fast in a room full of strangers. These qualities are something that can be trained overtime, but it also helps if the person already has these traits as a baseline to begin creating that culture from the first time the students step into the classroom.

CHANGES SPECIFIC TO *AEUGS*

A compilation of data collected from participants about the course lead the researcher to consider a new breakdown of timing for the *AEUGS* curriculum. Currently, *AEUGS* runs for 12 hours, with an average of eight hours in class and four hours of at home. Feedback from participants and observations from the instructor suggests that this could be reduced to eight

hours total, without taking away from the course. The impact of this change should be evaluated in future sessions, but the original course was designed for high school aged students, hence the 12 hour length. The undergraduate students who took this course proved to grasp concepts quickly and come to conclusions during the discussions in a timely manner. As such, classes sometimes ended early. Feedback about at home assignments was also that they took about a half hour to complete, instead of the assumed one hour. The new suggestion for format would be six hours of in person instruction and about two hours of at home assignments.

If the course moves forward in this format, then a breakdown of topics would look as follows:

- Pre-Course Assignment (30 minutes): Pre-Survey to assess base levels of empathy
- Class 1 (Two Hours):
    - One hour - Definition of Empathy
    - One hour - Perceiving Emotions
- At Home Assignment 1 (30 min): Personal definition of empathy and perceiving emotions
- Class 2 (Two Hours):
    - One hour - Perceiving emotions
    - One hour - Understanding and Responding to Emotions
- At Home Assignment 2 (30 min): Understanding emotions and responding to them while separating self from other
- Class 3 (Two Hours)
    - One hour - Understanding and Responding to Emotions
    - One hour - Separating self from other
- At Home Assignment 3 (30 min): Post-class evaluation of empathy levels

This revised schedule would allow for a focus on the important topics without distractions or wasting time on unnecessary, non-significant components such as the definition of empathy.

FUTURE DIRECTIONS FOR RESEARCH

This study has inspired ideas for items that could be researched in similar studies in the future. They include broadening the age range of participants, looking at cognitive empathy levels compared to emotional empathy levels, analyzing why gender impacted the ability to separate one from another, but did not seem to affect anything else, researching the impacts of voluntarily signing up for the course compared to a mandate to take the course, and looking at how reducing the hours for the course affects the results. Each of these would add to the knowledge gaps of empathy education courses for youth and young adults.

To broaden the age range of participants, there are a few suggestions of what could be done. Extending the program to include graduate students would be a good first step. Some graduate students fit into the 18 to 25 year old range, but some are older, which would help to extend the program. The version of the curriculum for graduate students could stay essentially the same, with perhaps a few additions to meet the needs of these older students. The program could also be offered to teachers as professional development, and these offerings could be analyzed for results, as teachers are a wide variety of ages. If offering an empathy education program to a wider age range, the researcher should look specifically at how age affects empathy levels, and if there is a difference in cognitive empathy levels versus emotional empathy levels as the research suggests.

In general, breaking empathy level evaluation into cognitive empathy compared to emotional empathy would be an interesting study. Cognitive empathy has to do with how well

someone can perceive the emotions of another, and emotional empathy is when someone feels another's emotions. As this study found that perceiving and understanding emotions are significant to empathy levels, that would point to the course increasing cognitive empathy levels. It would be interesting to see if emotional empathy also increases. A third type of empathy, or active empathy, is also considered to be a result of completing this course. While this type of empathy was not tested in the quantitative surveys, it was reflected in the qualitative surveys as a result of the class. Future studies could build on this and see if participants have higher levels of activated empathy at the end of the course, or empathy that drives social action to help others in need.

A third item that could be researched in future studies is looking more closely at how gender affects empathy levels. In this study, the only real significant differences in gender showed up in the ability to separate one's emotions from another's emotions. Researching more into why this particular facet of empathy was affected, as well as what else gender might affect could help to determine what sort of impact gender has on empathy levels. This particular study consisted of 30% males and 60% females. It would be interesting to see if anything changes if the study population consisted of exactly 50% male participants and 50% female participants in the study population. The main influence would likely be on in-class discussions, which could be significant on the final results of the study.

The fourth suggestion for future research is to see if volunteering to take an empathy education course provides different results from being mandated to take the course. The final cohort was volunteered by their instructor to take the course as part of their leadership class. These students seemed less excited to come to the class each day and were not as open to class

discussions. It would be interesting to run a study with 50% volunteers and 50% mandated participants and see if the results differed.

The final suggestion for future research is to see if the suggested changes to the course format affect the results of the *AEUGS* program. As the program is now, it seemed like it could be condensed to create a more meaningful experience. The only fear in condensing time is that participants would not have as much time to share and develop personal connections. This should be looked at more closely to see if changing the amount of class time, both in person and at home, influences the results of the study.

Overall, this research study provides information that is relevant to many communities around the world. The curriculum could be modified to fit whatever a college or university needs, such as a stand-alone program for faculty and staff to train them on including empathy education in their classroom or a semester long program on empathy and empathy education for students. It could easily be woven into a freshman introductory class, or as workshops for students to sign up to take. It would be great to see this research and program continued in any capacity, to add to the sparse knowledge of empathy education for young adults. The fact that the program did increase empathy levels overall is a good sign that with future studies the knowledge base could be expanded to create an even more efficient, well-planned program that could help many people.

CONCLUSION

This study provides a base to build upon with future studies into empathy education. Participants scored higher on the post-tests than they did on the pre-tests, adding to existing evidence that interventions that teach empathy skills increase empathy levels of participants

(Table 5.2 and Figure 5.1). This is great news for anyone who wants to improve the lives of others, as empathy has been shown to be good for both the one giving empathy (increasing their academic and social skills) and the one receiving empathy (who is being helped). Using this study as a base for determining which components of an empathy education courses impact empathy levels the most will allow future educators and researchers to focus on these aspects, leading to the creation of empathy education courses that are meaningful and impactful for all involved.

The term and concept of empathy is a complex, layered being whose study and understanding spans a variety of fields. Empathy can be overwhelming when looking at it from an outside perspective. Empathy education courses are a practical tool that can bring empathy into the lives of many, creating a safe environment for exploration and enhancement of this life skill. And increasing empathy levels is not just for the greater good. It also has a positive impact on the individual, who will live happier lives with better social interactions that are important to the very hardwiring of the human brain.

This study is one that has never been done before. It provides knowledge to fill a gap in the education of young adults, who are at a very important stage of ego development. As these young adults, aged 18 to 25, explore their identity and values, offering courses such as *Activating Empathy for Undergraduate College Students* will allow participants to flourish in their environments while supporting those around them. In a world where interaction with others different from oneself is common, having tools to help with social interactions leads to better production and happier and healthier societies. This is a major contribution to the field of empathy education, and one that should be built upon for future studies in any study about teaching empathy to young adults.

BIBLIOGRAPHY

Admission Statistics. (2020). Penn State Study Body Statistics. https://admissions.psu.edu/apply/statistics/

Babbie, E. R. (2015). *The Practice of Social Research - Standalone Book* (14th ed.). Cengage Learning.

Baron-Cohen, S., & Wheelwright, S. (2004). The Empathy Quotient: An Investigation of Adults with Asperger Syndrome or High Functioning Autism, and Normal Sex Differences. *Journal of Autism and Developmental Disorders*, *34*(2), 163–175. https://doi.org/10.1023/b:jadd.0000022607.19833.00

Barr, J. J., & Higgins-D'Alessandro, A. (2009). How adolescent empathy and prosocial behavior change in the context of school culture: A two-year longitudinal study. *Adolescence*, *44*(176), 751–772. https://pubmed.ncbi.nlm.nih.gov/20432599/

Barry, M. M., Clarke, A. M., Jenkins, R., & Patel, V. (2013). A systematic review of the effectiveness of mental health promotion interventions for young people in low and middle income countries. *BMC Public Health*, *13*(1), 835–852. https://doi.org/10.1186/1471-2458-13-835

Batson, C. D., Sager, K., Garst, E., Kang, M., & et al. (1997). Is empathy-induced helping due to self-other merging? *Journal of Personality and Social Psychology*, *73*(3), 495–509. https://doi.org/10.1037/0022-3514.73.3.495

Beadle, J. N., & de la Vega, C. E. (2019). Impact of Aging on Empathy: Review of Psychological and Neural Mechanisms. *Frontiers in Psychiatry*, *10*, 10–12. https://doi.org/10.3389/fpsyt.2019.00331

Beadle, J. N., Sheehan, A. H., Dahlben, B., & Gutchess, A. H. (2013). Aging, Empathy, and Prosociality. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *70*(2), 213–222. https://doi.org/10.1093/geronb/gbt091

Berliner, D. C., & Calfee, R. C. (1996). *Handbook of Educational Psychology (Macmillan Research on Education Handbook Series)*. Macmillan Library Reference.

Blalock, H. M. (1979). *Social Statistics (McGraw-Hill Series in Sociology)* (2nd ed.). McGraw-Hill Humanities/Social Sciences/Languages.

Blimling, G. (2010). *The Resident Assistant: Applications and Strategies for Working with College Students in Residence Halls* (7th ed.). Kendall Hunt Publishing.

Bråten, S. (2013). *Roots and Collapse of Empathy: Human nature at its best and at its worst (Advances in Consciousness Research)*. John Benjamins Publishing Company.

Caprara, G. V., Barbaranelli, C., Pastorelli, C., Bandura, A., & Zimbardo, P. G. (2000). Prosocial Foundations of Children's Academic Achievement. *Psychological Science*, *11*(4), 302–306. https://doi.org/10.1111/1467-9280.00260

Carifio, J., & Perla, R. J. (2007). Ten Common Misunderstandings, Misconceptions, Persistent Myths and Urban Legends about Likert Scales and Likert Response Formats and their Antidotes. *Journal of Social Sciences*, *3*(3), 106–116. https://doi.org/10.3844/jssp.2007.106.116

Carr, L., Iacoboni, M., Dubeau, M.-C., Mazziotta, J. C., & Lenzi, G. L. (2003). Neural mechanisms of empathy in humans: A relay from neural systems for imitation to limbic areas. *Proceedings of the National Academy of Sciences*, *100*(9), 5497–5502. https://doi.org/10.1073/pnas.0935845100

Cassidy, S. (2004). Learning Styles: An overview of theories, models, and measures. *Educational Psychology*, *24*(4), 419–444. https://doi.org/10.1080/0144341042000228834

Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H. S., & Hawkins, J. D. (2004). Positive Youth Development in the United States: Research Findings on Evaluations of Positive Youth Development Programs. *The ANNALS of the American Academy of Political and Social Science*, *591*(1), 98–124. https://doi.org/10.1177/0002716203260102

Chase-Lansdale, P. l., Wakschlag, L. S., & Brooks-Gunn, J. (1995). A psychological perspective on the development of caring in children and youth: the role of the family. *Journal of Adolescence*, *18*(5), 515–556. https://doi.org/10.1006/jado.1995.1037

Chiao, J. Y., & Mathur, V. A. (2010). Intergroup Empathy: How Does Race Affect Empathic Neural Responses? *Current Biology*, *20*(11), R478–R480. https://doi.org/10.1016/j.cub.2010.04.001

Christov-Moore, L., Simpson, E. A., Coudé, G., Grigaityte, K., Iacoboni, M., & Ferrari, P. F. (2014). Empathy: Gender effects in brain and behavior. *Neuroscience & Biobehavioral Reviews*, *46*, 604–627. https://doi.org/10.1016/j.neubiorev.2014.09.001

Cohn, L. D. (1991). Sex differences in the course of personality development: A meta-analysis. *Psychological Bulletin*, *109*(2), 252–266. https://doi.org/10.1037/0033-2909.109.2.252

Compassion. (2020). In *Merriam-Webster*. https://www.merriam-webster.com/dictionary/compassion

Coplan, A. (2011). Will the real empathy please stand up? A case for a narrow conceptualization. *The Southern Journal of Philosophy*, 49, 40–65. https://doi.org/10.1111/j.2041-6962.2011.00056.x.

Creswell, J. W., & Clark, V. P. L. (2010). *Designing and Conducting Mixed Methods Research* (Second ed.). SAGE Publications, Inc.

DasGupta, S., & Charon, R. (2004). Personal Illness Narratives: Using Reflective Writing to Teach Empathy. *Academic Medicine*, *79*(4), 351–356. https://doi.org/10.1097/00001888-200404000-00013

Davis, M. H. (1983). The effects of dispositional empathy on emotional reactions and helping: A multidimensional approach. *Journal of Personality*, *51*(2), 167–184. https://doi.org/10.1111/j.1467-6494.1983.tb00860.x

de Vries, H., Weijts, W., Dijkstra, M., & Kok, G. (1992). The Utilization of Qualitative and Quantitative Data for Health Education Program Planning, Implementation, and Evaluation: A Spiral Approach. *Health Education Quarterly*, *19*(1), 101–115. https://doi.org/10.1177/109019819201900107

Decety, J., & Jackson, P. L. (2006). A Social-Neuroscience Perspective on Empathy. *Current Directions in Psychological Science*, *15*(2), 54–58. https://doi.org/10.1111/j.0963-7214.2006.00406.x

Decety, J., & Moriguchi, Y. (2007). The empathic brain and its dysfunction in psychiatric populations: implications for intervention across different clinical conditions. *BioPsychoSocial Medicine*, *1*(1), 22. https://doi.org/10.1186/1751-0759-1-22

Deković, M., & Gerris, J. R. M. (1994). Developmental analysis of social cognitive and behavioral differences between popular and rejected children. *Journal of Applied Developmental Psychology*, *15*(3), 367–386. https://doi.org/10.1016/0193-3973(94)90038-8

DiLalla, L. F., Hull, S. K., & Dorsey, J. K. (2004). Effect of Gender, Age, and Relevant Course Work on Attitudes Toward Empathy, Patient Spirituality, and Physician Wellness. *Teaching and Learning in Medicine*, *16*(2), 165–170. https://doi.org/10.1207/s15328015tlm1602_8

Dovidio, J. F., Gaertner, S. L., & Johnson, J. D. (2000, April). *New directions in prejudice and prejudice reduction: The role of cognitive representations and affect* [Breakout Session]. Society of Experimental Social Psychology, St. Louis, Missouri, USA.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions. *Child Development*, *82*(1), 405–432. https://doi.org/10.1111/j.1467-8624.2010.01564.x

Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A Meta-Analysis of After-School Programs That Seek to Promote Personal and Social Skills in Children and Adolescents. *American Journal of Community Psychology*, *45*(3–4), 294–309. https://doi.org/10.1007/s10464-010-9300-6

ED.gov. (2011, October 20). Mission Statement. https://www2.ed.gov/about/overview/mission/mission.html

Eisenberg, N., & Fabes, R. A. (1990). Empathy: Conceptualization, measurement, and relation to prosocial behavior. *Motivation and Emotion*, *14*(2), 131–149. https://doi.org/10.1007/bf00991640

Eisenberg, N., Fabes, R. A., & Spinrad, T. (2006). Prosocial Development. In *Handbook of Child Psychology: Social, Emotional, and Personality Development* (6th ed., Vol. 3, pp. 646–718). Wiley & Sons.

Eisenberg, N., & Lennon, R. (1983). Sex differences in empathy and related capacities. *Psychological Bulletin*, *94*(1), 100–131. https://doi.org/10.1037/0033-2909.94.1.100

Empathy. (2016). In *Online Etymology Dictionary*. https://www.etymonline.com/search?q=empathy&source=ds_search.

Evans, B. J., Stanley, R. O., & Burrows, G. D. (1993). Measuring medical students' empathy skills. *British Journal of Medical Psychology*, *66*(2), 121–133. https://doi.org/10.1111/j.2044-8341.1993.tb01735.x

Farrant, B. M., Devine, T. A. J., Maybery, M. T., & Fletcher, J. (2011). Empathy, Perspective Taking and Prosocial Behaviour: The Importance of Parenting Practices. *Infant and Child Development*, *21*(2), 175–188. https://doi.org/10.1002/icd.740

Feingold, A. (1994). Gender differences in personality: A meta-analysis. *Psychological Bulletin*, *116*(3), 429–456. https://doi.org/10.1037/0033-2909.116.3.429

Feshbach, N. D., & Feshbach, S. (1969). The relationship between empathy and aggression in two age groups. *Developmental Psychology*, *1*(2), 102–107. https://doi.org/10.1037/h0027016

Feshbach, N. D., & Feshbach, S. (2011). Empathy and education. In J. Decety & W. Ickes (Eds.), *The Social Neuroscience of Empathy* (pp. 201–225). The MIT Press.

Fine, V. K., & Therrien, M. E. (1977). Empathy in the doctor-patient relationship. *Academic Medicine*, *52*(9), 752–757. https://doi.org/10.1097/00001888-197709000-00005

Froeschle Hicks, J., Le Clair, B., & Berry, S. (2016). Using Solution-Focused Dramatic Empathy Training to Eliminate Cyber-Bullying. *Journal of Creativity in Mental Health*, *11*(3–4), 378–390. https://doi.org/10.1080/15401383.2016.1172533

Galinsky, A. D., & Ku, G. (2004). The Effects of Perspective-Taking on Prejudice: The Moderating Role of Self-Evaluation. *Personality and Social Psychology Bulletin*, *30*(5), 594–604. https://doi.org/10.1177/0146167203262802

Ganczarek, J., Hünefeldt, T., & Olivetti Belardinelli, M. (2018). From "Einfühlung" to empathy: exploring the relationship between aesthetic and interpersonal experience. *Cognitive Processing*, *19*(2), 141–145. https://doi.org/10.1007/s10339-018-0861-x

Gano-Overway, L. A., Newton, M., Magyar, T. M., Fry, M. D., Kim, M.-S., & Guivernau, M. R. (2009). Influence of caring youth sport contexts on efficacy-related beliefs and social behaviors. *Developmental Psychology*, *45*(2), 329–340. https://doi.org/10.1037/a0014067

Garandeau, C. F., Vartio, A., Poskiparta, E., & Salmivalli, C. (2016). School Bullies' Intention to Change Behavior Following Teacher Interventions: Effects of Empathy Arousal, Condemning of Bullying, and Blaming of the Perpetrator. *Prevention Science*, *17*(8), 1034–1043. https://doi.org/10.1007/s11121-016-0712-x

Goldberg, A. (2011). The Enduring Presence of Heinz Kohut. *Journal of the American Psychoanalytic Association*, *59*(2), 289–312. https://doi.org/10.1177/0003065111406269

Grühn, D., Rebucal, K., Diehl, M., Lumley, M., & Labouvie-Vief, G. (2008). Empathy across the adult lifespan: Longitudinal and experience-sampling findings. *Emotion*, *8*(6), 753–765. https://doi.org/10.1037/a0014123

Hall, J. A. (1978). Gender effects in decoding nonverbal cues. *Psychological Bulletin*, *85*(4), 845–857. https://doi.org/10.1037/0033-2909.85.4.845

Hall, J. A. (1984). *Nonverbal Sex Differences: Communication Accuracy and Expressive Style*. The Johns Hopkins University Press.

Hardee, J. (2003). An Overview of Empathy. *The Permanente Journal*, 51–54. https://doi.org/10.7812/tpp/03-072

Henry-Tillman, R., Deloney, L. A., Savidge, M., Graham, C. j., & Klimberg, V. s. (2002). The medical student as patient navigator as an approach to teaching empathy. *The American Journal of Surgery*, *183*(6), 659–662. https://doi.org/10.1016/s0002-9610(02)00867-x

Hoffman, M. L. (1977a). Personality Development in Deaf Children. *Social Work*, 295–321. https://doi.org/10.1093/sw/22.1.54

Hoffman, M. L. (1977b). Sex differences in empathy and related behaviors. *Psychological Bulletin*, *84*(4), 712–722. https://doi.org/10.1037/0033-2909.84.4.712

Hoffman, M. L. (1982). Development of prosocial motivation: Empathy and guilt. In H. Beilin & N. Eisenberg (Eds.), *The Development of Prosocial Behavior (Developmental Psychology)* (1st ed., pp. 281–313). Academic Press.

Hoffman, M. L. (2010). *Empathy and Moral Development: Implications for Caring and Justice*. Cambridge University Press.

Homer, & Pope, A. (2013). *THE ILIAD and THE ODYSSEY (complete, unabridged, and in verse)* (First ed.). Classic Homer: Iliad and Odyssey.

Hope, E. C., & Jagers, R. J. (2014). The Role of Sociopolitical Attitudes and Civic Education in the Civic Engagement of Black Youth. *Journal of Research on Adolescence*, *24*(3), 460–470. https://doi.org/10.1111/jora.12117

Howe, D. (2012). *Empathy: What it is and why it matters* (2012th ed.). Springer.

Hwang, H. (2015). Caring for Residents of Eldercare Facilities: A Concept Analysis. *International Journal of Nursing Knowledge*, *28*(1), 37–43. https://doi.org/10.1111/2047-3095.12103

Jennings, C. G., MacDonald, T. M., Wei, L., Brown, M. J., McConnachie, L., & Mackenzie, I. S. (2015). Does offering an incentive payment improve recruitment to clinical trials and increase the proportion of socially deprived and elderly participants? *Trials*, *16*(1), 14–40. https://doi.org/10.1186/s13063-015-0582-8

Jordan, K. A., Gagnon, R. J., Anderson, D. M., & Pilcher, J. J. (2018). Enhancing the College Student Experience: Outcomes of a Leisure Education Program. *Journal of Experiential Education*, *41*(1), 90–106. https://doi.org/10.1177/1053825917751508

Juckel, G., Heinisch, C., Welpinghus, A., & Brüne, M. (2018). Understanding Another Person's Emotions—An Interdisciplinary Research Approach. *Frontiers in Psychiatry*, *9*, 21–22. https://doi.org/10.3389/fpsyt.2018.00414

Khokhar, T. (2017, April 17). *World Bank Blogs*. Https://Blogs.Worldbank.Org/Opendata/Chart-How-Worlds-Youth-Population-Changing. https://blogs.worldbank.org/

Kim, J. and C. Mueller. 1978. *Factor Analysis: Statistical Methods and Practical Issues*. Beverly Hills, CA: Sage Publications.

Kitzinger, J. (1994). The methodology of Focus Groups: the importance of interaction between research participants. *Sociology of Health and Illness*, *16*(1), 103–121. https://doi.org/10.1111/1467-9566.ep11347023

Kohut, H. (1982). Introspection, empathy, and the semi-circle of mental health. *The International Journal of Psycho-Analysis*, *63*(4), 395–407. https://psycnet.apa.org/record/1983-28444-001

Kokko, K., & Pulkkinen, L. (2000). Aggression in childhood and long-term unemployment in adulthood: A cycle of maladaptation and some protective factors. *Prevention & Treatment, 3*(1), 463–472. https://doi.org/10.1037/1522-3736.3.1.332a

Kolb, D. A. (2014). *Experiential Learning: Experience as the Source of Learning and Development (2nd Edition)* (2nd ed.). Pearson FT Press.

Koltko-Rivera, M. E. (2006). Rediscovering the Later Version of Maslow's Hierarchy of Needs: Self-Transcendence and Opportunities for Theory, Research, and Unification. *Review of General Psychology, 10*(4), 302–317. https://doi.org/10.1037/1089-2680.10.4.302

Kramer, D., Ber, R., & Moore, M. (1989). Increasing empathy among medical students. *Medical Education,* 23(2), 168–173. https://doi.org/10.1111/j.1365-2923.1989.tb00881.x.

Krznaric, R. (2015). *Empathy: Why It Matters, and How to Get It* (Reprint ed.). TarcherPerigee.

Lamm, C., Batson, C. D., & Decety, J. (2007). The Neural Substrate of Human Empathy: Effects of Perspective-taking and Cognitive Appraisal. *Journal of Cognitive Neuroscience, 19*(1), 42–58. https://doi.org/10.1162/jocn.2007.19.1.42

Lamothe, M., McDuff, P., Pastore, Y. D., Duval, M., & Sultan, S. (2018). Developing professional caregivers' empathy and emotional competencies through mindfulness-based stress reduction (MBSR): results of two proof-of-concept studies. *BMJ Open, 8*(1), e018421. https://doi.org/10.1136/bmjopen-2017-018421

Lancaster, T., Hart, R., & Gardner, S. (2002). Literature and medicine: evaluating a special study module using the nominal group technique. *Medical Education, 36*(11), 1071–1076. https://doi.org/10.1046/j.1365-2923.2002.01325.x

Lanzoni, S. (2015, October 15). A short history of empathy. *The Atlantic*. Retrieved from https://www.theatlantic.com/health/archive/2015/10/a-short-history-of-empathy/409912/

Langer, E. J. (2014). *Mindfulness, 25th anniversary edition (A Merloyd Lawrence Book)* (25th Anniversary ed.). Da Capo Lifelong Books.

Lawrence, E.J, Shaw P., Baker, D., Baron-Cohen, S, & David, A.S. (2004). Measuring empathy: reliability and validity of the Empathy Quotient. *Psychological Medicine, 34*(5), 911–920. https://doi.org/10.1017/s0033291703001624

Levenson, R. W., & Ruef, A. M. (1992). Empathy: A physiological substrate. *Journal of Personality and Social Psychology, 63*(2), 234–246. https://doi.org/10.1037/0022-3514.63.2.234

Levine, D. A. (2009). *Teaching Empathy: A Blueprint for Caring, Compassion, and Community* (Pap/Com ed.). Solution Tree.

Limber, S. P., Olweus, D., Wang, W., Masiello, M., & Breivik, K. (2018). Evaluation of the Olweus Bullying Prevention Program: A large scale study of U.S. students in grades 3–11. *Journal of School Psychology*, *69*, 56–72. https://doi.org/10.1016/j.jsp.2018.04.004

Lozano, L. M., García-Cueto, E., & Muñiz, J. (2008). Effect of the Number of Response Categories on the Reliability and Validity of Rating Scales. *Methodology*, *4*(2), 73–79. https://doi.org/10.1027/1614-2241.4.2.73

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, *50*(4), 370–396. https://doi.org/10.1037/h0054346

Matsangidou, M., Otterbacher, J., Ang, C. S., & Zaphiris, P. (2018). Can the crowd tell how I feel? Trait empathy and ethnic background in a visual pain judgment task. *Universal Access in the Information Society*, *17*(3), 649–661. https://doi.org/10.1007/s10209-018-0611-y

Matthews, D. B., & Hamby, J. V. (1995). A Comparison of the Learning Styles of High School and College/University Students. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, *68*(4), 257–261. https://doi.org/10.1080/00098655.1995.9957245

McKenna, B. (2018, July 17). *Research Shows That When it Comes to Student Achievement, Money Matters*. Learning Policy Institute. https://learningpolicyinstitute.org/press-release/research-shows-student-achievement-money-matters

McLaren, K. (2013). *The Art of Empathy: A Complete Guide to Life's Most Essential Skill* (10/16/13 ed.). Sounds True.

Mcleod, S. (2020, March 20). *Maslow's Hierarchy of Needs*. Simply Psychology. https://www.simplypsychology.org/maslow.html

Mehrabian, A., & Epstein, N. (1972). A measure of emotional empathy1. *Journal of Personality*, *40*(4), 525–543. https://doi.org/10.1111/j.1467-6494.1972.tb00078.x

Miller, P. A., & Eisenberg, N. (1988). The relation of empathy to aggressive and externalizing/antisocial behavior. *Psychological Bulletin*, *103*(3), 324–344. https://doi.org/10.1037/0033-2909.103.3.324

Newen, A., Welpinghus, A., & Juckel, G. (2015). Emotion Recognition as Pattern Recognition: The Relevance of Perception. *Mind & Language*, *30*(2), 187–208. https://doi.org/10.1111/mila.12077

Nguyen, T. N. Q., Ngo, L. V., & Surachartkumtonkun, J. (2019). When do-good meets empathy and mindfulness. *Journal of Retailing and Consumer Services, 50*, 22–29. https://doi.org/10.1016/j.jretconser.2019.03.020

O'Brien, E., Konrath, S. H., Gruhn, D., & Hagen, A. L. (2012). Empathic Concern and Perspective Taking: Linear and Quadratic Effects of Age Across the Adult Life Span. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *68*(2), 168–175. https://doi.org/10.1093/geronb/gbs055

O′Connell, A. A. (2005). *Logistic Regression Models for Ordinal Response Variables (Quantitative Applications in the Social Sciences)* (1st ed.). SAGE Publications, Inc.

Odera, E. (2018). *Examining the impacts of youth participatory evaluation methods on a youth participatory action research setting*. The Pennsylvania State University. https://etda.libraries.psu.edu/files/final_submissions/17665

Oldham, J. (1994). Experimental and quasi -experimental research designs. *Nurse Researcher*, *1*(4), 26–36. https://doi.org/10.7748/nr.1.4.26.s4

Palladino, B. E., Nocentini, A., & Menesini, E. (2016). Evidence-based intervention against bullying and cyberbullying: Evaluation of the NoTrap! program in two independent trials. *Aggressive Behavior*, *42*(2), 194–206. https://doi.org/10.1002/ab.21636

Parke, R., & Slaby, R. (1983). The Development of Aggression. In M. E. Hetherington & P. Mussen (Eds.), *Handbook of Child Psychology, Socialization, Personality and Social Development (Volume 4)* (Volume 4 ed., pp. 457–641). Wiley.

Pavlovich, K., & Krahnke, K. (2011). Empathy, Connectedness and Organisation. *Journal of Business Ethics*, *105*(1), 131–137. https://doi.org/10.1007/s10551-011-0961-3

Pavlovich, K., & Krahnke, K. (2014). *Organizing through Empathy (Routledge Studies in Management, Organizations and Society)* (1st ed.). Routledge.

Payton, J., Weissberg, R.P., Durlak, J.A., Dymnicki, A.B., Taylor, R.D., Schellinger, K.B. and Pachan, M. (2008). The positive impact of social and emotional learning for kindergarten to eighth-grade students: findings from three scientific reviews, technical report. Collaborative for Academic, Social, and Emotional Learning, Chicago, IL.

Poole, A. D., & Sanson-Fisher, R. W. (1979). Understanding the patient: A neglected aspect of medical education. *Social Science & Medicine. Medical Psychology and Medical Sociology*, *13*(1), 37–43. https://doi.org/10.1016/0160-7979(79)90006-7

Poole, A. D., & Sanson-Fisher, R. W. (1980). Long-term effects of empathy training on the interview skills of medical students. *Patient Counselling and Health Education*, *2*(3), 125–127. https://doi.org/10.1016/s0738-3991(80)80053-x

Preston, S. D., & de Waal, F. B. M. (2002). Empathy: Its ultimate and proximate bases. *Behavioral and Brain Sciences*, *25*(1), 1–20. https://doi.org/10.1017/s0140525x02000018

Pulkkinen, L., & Tremblay, R. E. (1992). Patterns of Boys' Social Adjustment in Two Cultures and at Different Ages: A Longitudinal Perspective. *International Journal of Behavioral Development*, *15*(4), 527–553. https://doi.org/10.1177/016502549201500406

Raskauskas, J. L., Gregory, J., Harvey, S. T., Rifshana, F., & Evans, I. M. (2010). Bullying among primary school children in New Zealand: relationships with prosocial behaviour and classroom climate. *Educational Research*, *52*(1), 1–13. https://doi.org/10.1080/00131881003588097

Reik, T. (1949). *Listening with the Third Ear the Inner Experience of a Psychoanalyst* (1st ed.). Farrar, Straus and Co.

Revilla, M. A., Saris, W. E., & Krosnick, J. A. (2013). Choosing the Number of Categories in Agree–Disagree Scales. *Sociological Methods & Research*, *43*(1), 73–97. https://doi.org/10.1177/0049124113509605

Rollins, J. A. (2014). Some thoughts about empathy. Pediatric nursing, 40(4), 162-163.

Rueckert, L., & Naybar, N. (2008). Gender differences in empathy: The role of the right hemisphere. *Brain and Cognition*, *67*(2), 162–167. https://doi.org/10.1016/j.bandc.2008.01.002

Saarni, C. (1990). Emotional competence: How emotions and relationships become integrated. In R. A. Thompson (Ed.), *Socioemotional Development* (pp. 115–182). University of Nebraska Press.

Sanson-Fisher, R. W., & Poole, A. D. (1978). Training medical students to empathize. *Medical Journal of Australia*, *1*(9), 473–476. https://doi.org/10.5694/j.1326-5377.1978.tb112562.x

Sanson-Fisher, R. W., & Poole, A. D. (1980). Simulated patients and the assessment of medical students' interpersonal skills. *Medical Education*, *14*(4), 249–253. https://doi.org/10.1111/j.1365-2923.1980.tb02269.x

Seeley, J., Biraro, S., Shafer, L. A., Nasirumbi, P., Foster, S., Whitworth, J., & Grosskurth, H. (2008). Using in-depth qualitative data to enhance our understanding of quantitative results regarding the impact of HIV and AIDS on households in rural Uganda. *Social Science & Medicine*, *67*(9), 1434–1446. https://doi.org/10.1016/j.socscimed.2008.07.001

Session 1. (2017). Activating Empathy (U.S. 1st Edition). State College, PA: King's Printing, pp. 8-10. [Cited as (AE: Introduction, 2017) in text]

Sessa, P., Meconi, F., Castelli, L., & Dell'Acqua, R. (2013). Taking one's time in feeling other-race pain: an event-related potential investigation on the time-course of cross-racial empathy. *Social Cognitive and Affective Neuroscience*, *9*(4), 454–463. https://doi.org/10.1093/scan/nst003

Shamay-Tsoory, S. G., Aharon-Peretz, J., & Perry, D. (2009). Two systems for empathy: a double dissociation between emotional and cognitive empathy in inferior frontal gyrus versus ventromedial prefrontal lesions. *Brain*, *132*(3), 617–627. https://doi.org/10.1093/brain/awn279

Shapiro, J., & Hunt, L. (2003). All the world's a stage: the use of theatrical performance in medical education. *Medical Education*, *37*(10), 922–927. https://doi.org/10.1046/j.1365-2923.2003.01634.x

Shapiro, J., Morrison, E., & Boker, J. (2004). Teaching Empathy to First Year Medical Students: Evaluation of an Elective Literature and Medicine Course. *Education for Health: Change in Learning & Practice*, *17*(1), 73–84. https://doi.org/10.1080/13576280310001656196

Silke, C., Boylan, C., Brady, B., & Dolan, P. (2019). Empathy, Social Values and Civic Behaviour among Early Adolescents in Ireland: Composite Report. Galway: UNESCO Child and Family Research Centre.

Soto, J. A., & Levenson, R. W. (2009). Emotion recognition across cultures: The influence of ethnicity on empathic accuracy and physiological linkage. *Emotion*, *9*(6), 874–884. https://doi.org/10.1037/a0017399

Thompson, A. E., & Voyer, D. (2014). Sex differences in the ability to recognise non-verbal displays of emotion: A meta-analysis. *Cognition and Emotion*, *28*(7), 1164–1195. https://doi.org/10.1080/02699931.2013.875889

Titchener, E. B. (1909). *Lectures on the Experimental Psychology of the Thought-processes*. Macmillan Publishers.

Toi, M., & Batson, C. D. (1982). More evidence that empathy is a source of altruistic motivation. *Journal of Personality and Social Psychology*, *43*(2), 281–292. https://doi.org/10.1037/0022-3514.43.2.281

Ursachi, G., Horodnic, I. A., & Zait, A. (2015). How Reliable are Measurement Scales? External Factors with Indirect Influence on Reliability Estimators. *Procedia Economics and Finance*, *20*, 679–686. https://doi.org/10.1016/s2212-5671(15)00123.

Verhoeven, M., Poorthuis, A. M. G., & Volman, M. (2018). The Role of School in Adolescents' Identity Development. A Literature Review. *Educational Psychology Review*, *31*(1), 35–63. https://doi.org/10.1007/s10648-018-9457-3

Walsh, R. A. (2010). Mindfulness and Empathy. In T. Bien, S. F. Hick, & Z. Segal (Eds.), *Mindfulness and the Therapeutic Relationship* (Reprint ed., pp. 72–86). The Guilford Press.

Waring, A. (1682). *The Heart of Care: Dignity in Action: A Guide to Person-Centred Compassionate Elder Care by Amanda Waring (2012-08-01)*. Souvenir Press.

Weare, K., & Nind, M. (2011). Mental health promotion and problem prevention in schools: what does the evidence say? *Health Promotion International*, *26*(suppl 1), i29–i69. https://doi.org/10.1093/heapro/dar075

Weijters, B., Cabooter, E., & Schillewaert, N. (2010). The effect of rating scale format on response styles: The number of response categories and response category labels. *International Journal of Research in Marketing*, *27*(3), 236–247. https://doi.org/10.1016/j.ijresmar.2010.02.004

Wentzel, K. R. (1993). Motivation and Achievement in Early Adolescence. *The Journal of Early Adolescence*, *13*(1), 4–20. https://doi.org/10.1177/0272431693013001001

Wilkes, M., Milgrom, E., & Hoffman, J. R. (2002). Towards more empathic medical students: a medical student hospitalization experience. *Medical Education*, *36*(6), 528–533. https://doi.org/10.1046/j.1365-2923.2002.01230.x

Winefield, H. R., & Chur-Hansen, A. (2000). Evaluating the outcome of communication skill teaching for entry-level medical students: does knowledge of empathy increase? *Medical Education*, *34*(2), 90–94. https://doi.org/10.1046/j.1365-2923.2000.00463.x

Wray-Lake, L., & Syvertsen, A. K. (2011). The developmental roots of social responsibility in childhood and adolescence. In C. A. Flanagan & B. D. Christens (Eds.), *Youth Civic Development: Work at the Cutting Edge: New Directions for Child and Adolescent Development, Number 134* (1st ed., pp. 11–25). Jossey-Bass.

Zahavi, D., & Overgaard, S. (2013). Empathy without isomorphism: A phenomenological account. In J. Decety (Ed.), *Empathy: From Bench to Bedside (Social Neuroscience)* (pp. 21–45). The MIT Press.

Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (2004). *Building Academic Success on Social and Emotional Learning: What Does the Research Say? (The Series on Social Emotional Learning)*. Teachers College Press.

APPENDIX A

PRE-TEST AND POST-TEST SURVEYS

PRE-TEST SURVEY

Before we embark into the Activating Empathy course, I want to assess some baseline feelings you have about empathy. Please answer the questions below to the best of your ability. You can skip a question at any time.

All comments and remarks will be kept anonymous - it will not be possible to identify you in any way.

Demographic Questions
Please answer each question to the best of your ability. If you do not wish to answer, just respond with N/A.

1. How old are you?
2. What is your gender?
3. What is your race?

Your Understanding of Empathy
For each of the following questions, please choose the response that best fits how strongly you agree or disagree with each statement. Your responses will fit the following scale:

1 = Strongly Disagree
2 = Disagree
3 = Neither Agree nor Disagree
4 = Agree
5 = Strongly Agree

4. I understand what empathy is.
   Strongly Disagree 1 2 3 4 5 Strongly Agree

5. Empathy is a skill that can be learned.
   Strongly Disagree 1 2 3 4 5 Strongly Agree

6. Empathy is a skill that can be practiced.
   Strongly Disagree 1 2 3 4 5 Strongly Agree

7. Empathy can improve our relationships with other people.
   Strongly Disagree 1 2 3 4 5 Strongly Agree

8. I believe learning about empathy is important.
   Strongly Disagree 1 2 3 4 5 Strongly Agree

9. I can easily tell if someone else wants to enter a conversation.
   Strongly Disagree 1 2 3 4 5 Strongly Agree

10. I prefer animals to humans.
Strongly Disagree 1 2 3 4 5 Strongly Agree

11. I try to keep up with current trends and fashions.
Strongly Disagree 1 2 3 4 5 Strongly Agree

12. I find it difficult to explain to others things that I understand easily, when they don't understand it the first time.
Strongly Disagree 1 2 3 4 5 Strongly Agree

13. I dream most nights.
Strongly Disagree 1 2 3 4 5 Strongly Agree

14. I really enjoy caring for other people
Strongly Disagree 1 2 3 4 5 Strongly Agree

15. I try to solve my own problems rather than discussing them with others.
Strongly Disagree 1 2 3 4 5 Strongly Agree

16. I find it hard to know what to do in a social situation.
Strongly Disagree 1 2 3 4 5 Strongly Agree

17. I am at my best first thing in the morning.
Strongly Disagree 1 2 3 4 5 Strongly Agree

18. People often tell me that I went too far in driving my point home in a discussion.
Strongly Disagree 1 2 3 4 5 Strongly Agree

19. It doesn't bother me too much if I am late meeting a friend.
Strongly Disagree 1 2 3 4 5 Strongly Agree

20. Friendships and relationships are just too difficult, so I tend not to bother with them.
Strongly Disagree 1 2 3 4 5 Strongly Agree

21. I would never break the law, no matter how minor.
Strongly Disagree 1 2 3 4 5 Strongly Agree

22. I often find it difficult to judge if something is rude or polite.
Strongly Disagree 1 2 3 4 5 Strongly Agree

23. In a conversation, I tend to focus on my own thoughts and feelings rather than on what my listener might be thinking.
Strongly Disagree 1 2 3 4 5 Strongly Agree

24. I prefer practical (physical) jokes to verbal humor.
Strongly Disagree 1 2 3 4 5 Strongly Agree

25. I live life for today rather than the future.
Strongly Disagree 1 2 3 4 5 Strongly Agree

26. When I was a child, I enjoyed cutting up worms to see what would happen.
Strongly Disagree 1 2 3 4 5 Strongly Agree

27. I can pick up quickly if someone says one thing but means another.
Strongly Disagree 1 2 3 4 5 Strongly Agree

28. I tend to have very strong opinions about morality.
Strongly Disagree 1 2 3 4 5 Strongly Agree

29. It is hard for me to see why some things upset people so much.
Strongly Disagree 1 2 3 4 5 Strongly Agree

30. I find it easy to put myself in somebody else's shoes.
Strongly Disagree 1 2 3 4 5 Strongly Agree

31. I think that good manners are the most important thing a parent can teach their child.
Strongly Disagree 1 2 3 4 5 Strongly Agree

32. I like to do things on the spur of the moment.
Strongly Disagree 1 2 3 4 5 Strongly Agree

33. I am quick to spot when someone in a group is feeling awkward or uncomfortable.
Strongly Disagree 1 2 3 4 5 Strongly Agree

34. If I say something that someone else is offended by, I think that that's their problem, not mine.
Strongly Disagree 1 2 3 4 5 Strongly Agree

35. If anyone asked me if I liked their haircut, I would reply truthfully, even if I didn't like it.
Strongly Disagree 1 2 3 4 5 Strongly Agree

36. I cannot always see why someone should have felt offended by a remark.
Strongly Disagree 1 2 3 4 5 Strongly Agree

37. People often tell me that I am very unpredictable.
Strongly Disagree 1 2 3 4 5 Strongly Agree

38. I enjoy being the center of attention at any social gathering.
Strongly Disagree 1 2 3 4 5 Strongly Agree

39. Seeing people cry does not really upset me.
Strongly Disagree 1 2 3 4 5 Strongly Agree

40. I enjoy having discussions about politics.
Strongly Disagree 1 2 3 4 5 Strongly Agree

41. I am very blunt, which some people take to be rudeness, even though this is unintentional.
Strongly Disagree 1 2 3 4 5 Strongly Agree

42. I do not find social situations confusing.
Strongly Disagree 1 2 3 4 5 Strongly Agree

43. I am good at predicting how someone will feel.
Strongly Disagree 1 2 3 4 5 Strongly Agree

44. Other people tell me I am good at understanding how they are feeling and what they are thinking.
Strongly Disagree 1 2 3 4 5 Strongly Agree

45. When I talk to people, I tend to talk about their experiences rather than my own.
Strongly Disagree 1 2 3 4 5 Strongly Agree

46. It upsets me to see an animal in pain.
Strongly Disagree 1 2 3 4 5 Strongly Agree

47. I am able to make decisions without being influenced by people's feelings.
Strongly Disagree 1 2 3 4 5 Strongly Agree

48. I can't relax until I have done everything I had planned to do that day.
Strongly Disagree 1 2 3 4 5 Strongly Agree

49. I can easily tell if someone else is interested or bored with what I am saying.
Strongly Disagree 1 2 3 4 5 Strongly Agree

50. I get upset if I see people suffering on news programs.
Strongly Disagree 1 2 3 4 5 Strongly Agree

51. Friends usually talk to me about their problems as they say that I am very understanding.
Strongly Disagree 1 2 3 4 5 Strongly Agree

52. I can sense if I am intruding, even if the other person doesn't tell me.
Strongly Disagree 1 2 3 4 5 Strongly Agree

53. I often start new hobbies, but quickly become bored with them and move onto something else.
Strongly Disagree 1 2 3 4 5 Strongly Agree

54. People sometimes tell me that I have gone too far with teasing.
Strongly Disagree 1 2 3 4 5 Strongly Agree

55. I would be too nervous to go on a big roller coaster.
Strongly Disagree 1 2 3 4 5 Strongly Agree

56. Other people often say that I am insensitive, though I don't always see why.
Strongly Disagree 1 2 3 4 5 Strongly Agree

57. If I see a stranger in a group, I think that it is up to them to make an effort to join in.
Strongly Disagree 1 2 3 4 5 Strongly Agree

58. I usually stay emotionally detached when watching a film.
Strongly Disagree 1 2 3 4 5 Strongly Agree

59. I like to be very organized in day-to-day life and often makes lists of the chores I have to do.
Strongly Disagree 1 2 3 4 5 Strongly Agree

60. I can tune into how someone else feels rapidly and intuitively.
Strongly Disagree 1 2 3 4 5 Strongly Agree

61. I don't like to take risks.
Strongly Disagree 1 2 3 4 5 Strongly Agree

62. I can easily work out what another person might want to talk about.
Strongly Disagree 1 2 3 4 5 Strongly Agree\

63. I can tell if someone is masking their true emotions.
Strongly Disagree 1 2 3 4 5 Strongly Agree

64. Before making a decision, I always weigh the pros and cons.
Strongly Disagree 1 2 3 4 5 Strongly Agree

65. I don't consciously work out the rules of social situations.
Strongly Disagree 1 2 3 4 5 Strongly Agree

66. I am good at predicting what someone will do.
Strongly Disagree 1 2 3 4 5 Strongly Agree

67. I tend to get emotionally involved with a friend's problems.
Strongly Disagree 1 2 3 4 5 Strongly Agree

68. I can usually appreciate the other person's viewpoint, even if I don't agree with it.
Strongly Disagree 1 2 3 4 5 Strongly Agree

Personal Experiences with Empathy

For each of the following questions, please respond to the best of your ability. If you do not wish to answer, please respond with N/A.

69. Define empathy in one or two sentences.

70. Explain a situation where you observed someone (it could be yourself) being empathetic.

Thank you!!
We look forward to working with you this semester!

POST-TEST SURVEY

Before we embark into the Activating Empathy course, I want to assess some baseline feelings you have about empathy. Please answer the questions below to the best of your ability. You can skip a question at any time.

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Please answer each question to the best of your ability. If you do not wish to answer, just respond with N/A.

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63. I can tell if someone is masking their true emotions.
Strongly Disagree 1 2 3 4 5 Strongly Agree

64. Before making a decision, I always weigh the pros and cons.
Strongly Disagree 1 2 3 4 5 Strongly Agree

65. I don't consciously work out the rules of social situations.
Strongly Disagree 1 2 3 4 5 Strongly Agree

66. I am good at predicting what someone will do.
Strongly Disagree 1 2 3 4 5 Strongly Agree

67. I tend to get emotionally involved with a friend's problems.
Strongly Disagree 1 2 3 4 5 Strongly Agree

68. I can usually appreciate the other person's viewpoint, even if I don't agree with it.
Strongly Disagree 1 2 3 4 5 Strongly Agree

Personal Experiences with Empathy

For each of the following questions, please respond to the best of your ability. If you do not wish to answer, please respond with N/A.

69. Define empathy in one or two sentences.

70. Explain a situation where you observed someone (it could be yourself) being empathetic.

Course Evaluation

Please evaluate the course and instructor by answering the following questions. Remember your responses are anonymous. Your responses will help us immensely with improving the course moving forward!

71. On a scale of 1 to 5, with 1 being not at all and 5 being you love it, how much did you enjoy participating in Activating Empathy?
I did not enjoy participating at all. 1 2 3 4 5 I loved participating!

72. What did you enjoy most about Activating Empathy? Why?

73. What did you find the most difficult or challenging about Activating Empathy? Why?

74. What was (were) your least favorite activity (activities) from Activating Empathy? Why?

75. What should we change about Activating Empathy?

76. How has Activating Empathy impacted you?

77. What is the best way to recruit students for Activating Empathy?

78. Is there anything else we should know?

Thank you!!
Thank you for taking this course and completing this evaluation. We could not do this without you!
Have a wonderful rest of your semester!

APPENDIX B

IRB APPROVAL AND EXEMPTION DETERMINATION

IRB APPROVAL

Activity Details (Letter Sent) Send the correspondence letter to the study team with the official IRB decision.

Author:	Courtney Whetzel (Prevention Research Center (UNIVERSITY PARK))
Logged For (IRB Submission):	Empathy in Young Adults
Activity Date:	4/24/2019 2:29 PM

Form:

Determination:
Approved

Approval date:
4/24/2019

Effective date:
4/24/2019

Activity Details

Correspondence letter:
Correspondence_for_STUDY00012053.pdf(0.01)

PennState

Office for Research Protections
Vice President for Research
The Pennsylvania State University
205 The 330 Building
University Park, PA 16802

814-865-1775
Fax: 814-865-8699
orp@psu.edu
research.psu.edu/orp

EXEMPTION DETERMINATION

Date: April 24, 2019

From: Courtney Whetzel, IRB Analyst

To: Mary Berardi

Type of Submission:	Initial Study
Title of Study:	Investigating the effect of The Activating Empathy Curriculum on Young Adults, Ages 18 - 22
Principal Investigator:	Mary Berardi
Study ID:	STUDY00012053
Submission ID:	STUDY00012053
Funding:	Not Applicable
Documents Approved:	• Empathy Curriculum, U.S. Revisions (1).pdf (0.01), Category: Other • Learning Journal (for students) (0.01), Category: Other • Post-Test Survey (0.01), Category: Data Collection Instrument • Pre-Test Survey (0.01), Category: Data Collection Instrument • Updated (4.17.2019) HRP - 591 (0.01), Category: IRB Protocol

The Office for Research Protections determined that the proposed activity, as described in the above-referenced submission, does not require formal IRB review because the research met the criteria for exempt research according to the policies of this institution and the provisions of applicable federal regulations.

Continuing Progress Reports are **not** required for exempt research. Record of this research determined to be exempt will be maintained for five years from the date of this notification. If your research will continue beyond five years, please contact the Office for Research Protections closer to the determination end date.

Changes to exempt research only need to be submitted to the Office for Research Protections in limited circumstances described in the below-referenced Investigator Manual. If changes are being considered and there are questions about whether IRB review is needed, please contact the Office for Research Protections.

We would like to know how the IRB Program can better serve you.
Please fill out our survey; it should take about a minute: https://www.research.psu.edu/irb/feedback.
ID27

Penn State researchers are required to follow the requirements listed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within CATS IRB (http://irb.psu.edu).

This correspondence should be maintained with your records.

APPENDIX C

TYPICAL *ACTIVATING EMPATHY FOR UNDERGRADUATE STUDENTS*

PROGRAM SCHEDULE

Session 1	**Agenda** **6:00pm - 6:15pm** Introductions **6:15pm - 6:30pm:** Ice Breaker - Question Cards **6:30pm - 7:15pm:** What is Empathy? **7:15pm - 7:30pm:** John's Story and Debrief **7:30pm - 7:50pm:** Reading Body Language **7:50pm - 8:00pm:** Wrap-up / Explain Homework **If time: Empathy in Real Life*
Session 2	**Agenda** **6:00pm - 6:15pm:** Announcements / Review Homework **6:15pm - 6:20pm:** Warm-up: Dualities **6:20pm - 6:30pm:** Finding Common Ground **6:30pm - 7:00pm:** Responding with Empathy **7:00pm - 7:15pm:** Someone Else's Shoes **7:15pm - 7:45pm:** Perspective Taking and Conflict **7:45pmpm - 8:00pm:** Befriending Meditation
Session 3	**Agenda** **6:00pm - 6:15pm:** Announcements / Review Homework **6:15pm - 6:45pm:** Warm-up: Giant Steps **6:45pm - 7:30pm:** Personality Compass **7:30pm - 7:50pm:** Setting Empathy Goals **7:50pm - 8:00pm:** Wrap-up / Homework Review
Session 4	**Agenda** **6:00pm - 6:15pm:** Announcements / Review Homework **6:15pm - 6:30pm:** Warm-up: Blasting Stereotypes **6:30pm - 7:00pm:** The Human Face **7:00pm - 8:00pm:** Empathy Post-Test

APPENDIX D

THE *ACTIVATING EMPATHY FOR UNDERGRADUATE COLLEGE STUDENTS* CURRICULUM AND FACILITATOR GUIDE

Activating Empathy for Undergraduate College Students

Curriculum and Facilitator Guide

Session 1

Exploring Empathy, Identifying Empathy in Everyday Life, Identifying and Practicing Empathy

Agenda

6:00pm - 6:15pm Introductions
6:15pm - 6:30pm: Ice Breaker - Question Cards
6:30pm - 7:15pm: What is Empathy?
7:15pm - 7:30pm: John's Story and Debrief
7:30pm - 7:50pm: Reading Body Language
7:50pm - 8:00pm: Wrap-up / Explain Homework
**If time: Empathy in Real Life*

Session 1 Summary and Objectives

To begin, this session introduces the meaning of the term "empathy" and examines the fact that it is an active choice to show empathy or not. The first activity in this session focuses on defining and understanding empathy. The second activity provides the opportunity to understand empathy through outside resources. The students themselves should provide examples, as this is one way of establishing that they understand the term. Secondly, students will learn to identify empathy and how it can be turned on and off. In Activity 3 the students practice turning empathy on and off in a situation. In this session students learn to identify empathy and practice key empathy skills in the form of reading body language and practicing empathetic listening. The fourth activity covers reading and displaying body language. The take home activities help students to reflect on their personal definitions of empathy and recognize it in their everyday lives.

On completion of this session students will be able to:

- Define and explain what empathy means.
- Identify examples of empathy they have encountered in their own lives.
- Identify the difference between an empathic response and a response that lacks empathy.
- Explain how responding with empathy is an active choice.
- Consider how to actively engage in empathy through body language, actions, and words.
- Identify the difference between an empathic response and a response that lacks empathy.
- Outline the reasons why understanding body language is an important empathy-related skill.
- Practice empathic listening and reflect on the importance of listening to people with empathy.

Session 1, Activity 1 Ice Breaker - Question Cards

Type of Activity: Ice Breaker

Materials: Question Cards

Activity Objective(s): To help students get to know one another.

Method:

1. Explain to students that you will be passing out the question cards. They are to take a card and find a partner who also has a card. They should ask the question, allow the other person to respond, and then switch cards, then find a new partner and repeat.

Session 1, Activity 2 Definition of Empathy

Part 1: What is Empathy?

Type of Activity: Brainstorm, Discussion

Materials: Whiteboard, Dry Erase Markers, Writing Utensils, Learning Journals

Activity Objective(s): To enable students to define what empathy means. To identify examples of empathy students have encountered.

Method:

1. Write the word empathy on the whiteboard and ask students how they would define empathy. Note any keywords on the whiteboard.
2. Read through the definitions of empathy in the Learning Journals on page 1.
3. Ask the class which definition they preferred. Take a vote and write the preferred definition on the whiteboard.
4. If you have available resources, watch some of the video resources provided below.
5. Discuss this definition and other words and examples that came up during the earlier discussion. You can guide this discussion using the following questions:
    - Why is empathy important?
    - Is empathy something people are born with or a skill that can be learned? Why?

Part 2: Empathy Explained by Others

Type of Activity: Video, Website Exploration

Materials: Projector, Computer, Speakers

Activity Objective(s): To provide students with alternate and in-depth definitions and examples of empathy from scholarly resources.

Method:

1. Choose a video or website (or two) from the list of resources below to show to the class.
2. After viewing the video or website, discuss how this definition of empathy agrees or disagrees with what you have already discussed surrounding the definition of empathy.

Videos:

- Brené Brown on Empathy https://www.youtube.com/watch?v=1Evwgu369Jw
- Sesame Street with Mark Ruffalo https://www.youtube.com/watch?v=9_1Rt1R4xbM
- Empathy can change the world https://www.youtube.com/watch?v=aU3QfyqvHk8
- What is empathy? https://www.youtube.com/watch?v=Q5jrUg_kXjY

Websites:

- 'Empathy Defined', Greater Good Magazine: https://greatergood.berkeley.edu/empathy/definition
- 'Empathy vs Sympathy', Psychology Today, 22 May, 2015, https://www.psychologytoday.com/blog/hide-and-seek/201505/empathy-vs-sympathy

Session 1, Activity 3 "Switching On" Empathy

Type of Activity: Story-telling, Reflection, Active Listening

Materials: John's Story *(Learning Journal, page 2)*

Activity Objective(s): To demonstrate that feeling empathy can be 'switched on' and 'switched off' by active choice.

Method:

1. Explain that the ability to empathize is something we are all born with. We need to be aware, however, of empathy in order to activate it. Explain that empathy is something that can be switched on and switched off, and that we need to make an effort to be empathetic.
2. Explain to the students that you are going to read a personal story to demonstrate that you can choose to switch on empathy or switch it off.
3. The first time they hear the story, they are asked to 'switch off' their feelings, to listen to the story in a detached way, and to shut down any emotional response to the story. You may need to expand on how students can 'switch off' and 'switch on' empathy. For example, for the second reading of the story, help them to activate the "empathy mode". For example, give them a few seconds to imagine what John looks like and to envision his home, suggesting that they imagine John is one of their friends or their brother. For the first reading, ask them to imagine they are listening to instructions for building furniture or a weather report and attempt to suppress any emotions that come up.
4. Read John's Story from the Learning Journal on page 2.
5. Now explain to the students that the story will be read a second time. This time, they are to 'switch on' empathy. They are to imagine themselves experiencing all the hurt of the person in the story, to feel the same emotions, think the same thoughts, and imagine themselves in the same situation.
6. Read John's Story a second time.
7. After reading a second time with empathy "turned on", lead a class discussion using the following questions:
    - How did it feel to actively turn empathy on and off?
    - Why do you think some people chose to deliberately "switch off" empathy when interacting with other people?

- Why could it be difficult to "switch on" empathy?
- What can we do to help ourselves "switch on" empathy?

Session 1, Activity 4 Reading Body Language

Type of Activity: Game, Role Playing

Materials: *Emotion Cards*

Activity Objective(s): To demonstrate the importance of body language in determining the emotional states of others.

Method:

1. Copy the *Emotion Cards* and cut them apart.
2. With the class, discuss the difference between verbal and non-verbal communication, and define what is meant by body language. *(see teacher notes on next page)*
3. Ask each participant to select an *Emotion Card*. They must not show the *Emotion Card* to anybody else.
4. Explain to students that this is like a game of charades. Ask students to come to the front of the room and act out the emotion on the card using only body language and limited props. They cannot make any sounds. You may prefer to ask your group to act out the emotion in pairs, making it clear which participant is conveying the emotion.
5. Discuss the activity with the class, using the following questions as a guide:
    - How did you determine which emotion was being acted out? Was it difficult? Why or why not?
    - How is body language an important part of communication?
    - How does reading body language relate to empathy?

If Time: Empathy in Real Life

Type of Activity: Brainstorm, Discussion

Materials: Whiteboard, Dry Erase Markers

Activity Objective(s): To enable students to identify when they have seen empathy in their lives.

1. Explain to the students that they are now going to reflect on a time they witnessed empathy in real life. This could be a time when somebody showed empathy to them, an occasion when they showed empathy to another person, or a time they witnessed a display of empathy between other people.

2. The teacher should give an example to the class of a time they encountered empathy, role-modelling the type of responses the students might give.
    - Remind students that if they are uncomfortable naming the people in their examples they can recount them as anonymous scenarios e.g. 'I once saw one girl help another boy in her class…' etc.
3. Ask students to break into pairs and spend a few minutes with their partner discussing their experience of empathy. Ask them to describe the people involved, what was said and what was done to show empathy, and the effect of the experience of empathy on the people involved.
4. Bring the class back together and ask for some volunteers to share their experience of empathy. Lead the discussion with the following questions:
    - How does it feel when somebody shows you empathy?
    - How challenging is it to show empathy? How can a situation or person involved in a situation change how challenging it is to show empathy?
    - What happens when there is lack of empathy in society?

Session 1 Take Home Activities

For the next session, students should:

- Identify examples of empathy that they notice during the week, whether this is in their own lives, on television, in books, or in the news, and make a note of some of these on page 3 in their Learning Journals.
- Reading Body Language Online Quiz - Take the quiz (link: http://greatergood.berkeley.edu/ei_quiz/) and record their score and thoughts about the quiz in their Learning Journal on page
- Carefully read the *Guide to Empathetic Listening* on page 3 of their Learning Journals.
- Take the Empathy Pre-Test (if you did not take it before beginning this class)

Session 2

Responding with Empathy, Commonalities, and Perspective-Taking

Agenda

6:00pm - 6:15pm: Announcements / Review Homework
6:15pm - 6:20pm: Warm-up: Dualities
6:20pm - 6:30pm: Finding Common Ground
6:30pm - 7:00pm: Responding with Empathy
7:00pm - 7:15pm: Someone Else's Shoes
7:15pm - 7:45pm: Perspective Taking and Conflict
7:45pmpm - 8:00pm: Befriending Meditation

Session 2 Summary and Objectives

The session starts by showing how to respond with empathy and allows students to practice a mindfulness meditation designed to cultivate feelings of compassion for others. The first activity has students read scenarios and design a skit to show the class how they would respond with empathy to those situations. The session covers responding with empathy, finding common ground with others and

allows students to practice a mindfulness meditation designed to cultivate feelings of compassion for others. The activity, "Dualities", allows students to begin to notice similarities they share with their classmates. The activity, "Finding Common Ground", explores one pathway to empathy: recognizing something of ourselves in others as a way of breaking down barriers and enabling empathy for others. Actively imagining what another person is experiencing, i.e. cognitive perspective-taking, has been identified as increasing levels of empathy (Lamm, Batson & Decety, 2007). Using this key empathy-enhancing skill, students practice "stepping into another person's shoes". In one activity students imaginatively take the place of somebody else they see in a photograph and speak from their perspective. Then the students examine how perspective-taking can have a positive effect in situations of conflict. The final activity is a mindfulness meditation exercise. Neuroscience research has suggested that 'Loving Kindness' meditations that focus attention on other people may increase compassion and empathy amongst practitioners (Lutz et. al, 2008). You will guide the students through a 'Loving Kindness' meditation.

On completion of this session students will be able to:

- Explain the different ways in which people can respond with empathy in specific situations.
- Experience how to cultivate feelings of compassion for others using mindfulness meditation.
- List commonalities they have with their classmates and hypothesize similarities they might have with people not in their class.
- Explain the importance of establishing common ground with others to empathy.
- Practice perspective-taking and understand its importance to cultivating empathy.
- Identify the importance of perspective-taking and empathy in resolving conflict.

Session 2, Activity 1 Dualities

Type of Activity: Game, Warm-up

Materials: List of Dualities *(see below)*

Activity Objective(s): To understand that everybody shares common traits, characteristics or experiences. Students will recognize that others in the class share commonalities they may not realize by seeing who picks the same of two options as they do.

Method:

1. Explain that finding common ground serves to bring people of all backgrounds, nations, ages, and cultures together and that this can serve as a first step to connecting with others and establishing empathy.
2. Tell the class you are going to read a list of two options. For each item you say, they are to pick which of the two items relates to themselves the most, and go to whichever side of the room you assign that choice. For example, if choice one is "Chocolate Ice Cream" and choice two is "Vanilla Ice Cream", you can instruct choice one people to go to the left of the room and choice two people to go to the right of the room. A list of items can be found below, but feel free to modify as you desire.
    - List of Duality Items:

- Chocolate Ice Cream or Vanilla Ice Cream
- Morning or Night
- Pencil or Pen
- Apple or Android
- Fruits or Vegetables
- Dogs or Cats
- Winter or Summer
- Sun or Rain
- Paper books or eBooks
- Mountains or Beach

Session 2, Activity 2 Finding Common Ground

Type of Activity: Game; Group work

Materials: Learning Journals, Writing Utensils, Whiteboard, Dry Erase Markers

Activity Objective(s): To understand that everybody shares common traits, characteristics or experiences. Students will identify that they share common ground with others by actively recognizing multiple commonalities rather than differences.

Method:

1. Explain to the class that now that they have found some similarities among the entire class, they will now come up with more in smaller groups.
2. Divide students into groups of three and ask the groups to gather together.
3. Explain to the class they must find 10 things that they all share in common with one another and write them on page 5 of their Learning Journals.
4. When a group has reached 10 things they can sit down. See the Teacher's Note below for some suggestions if groups are stuck, but try to make them come up with them on their own.
5. When all groups are seated again, ask the class who sat down first to read out their list. Ask the rest of the students to raise their hands if they share anything on the list. Record in two lists any traits that (1) the entire class and (2) the majority of the class shares on the whiteboard.
6. Continue through the groups creating a list of commonalities shared by the entire class.
7. Once you have a list of commonalities shared by the entire class, lead a class discussion using the following questions:
8. In what situations do we tend to look for common ground with other people and in what situations do we tend to focus on the differences?
9. Ask students to think about somebody in their lives with whom they are in conflict, with whom they disagree, or who has different views to them. Ask them to think of three things that they share in common with that person. Suggest that this is an exercise that might help in situations of conflict: establishing common ground with people can help to break down barriers between people and help us to see others as human beings just like us rather than as "enemies".
    - What happened when you started to think about commonalities you have with this person?

- Do you think we could find some common ground with every person on Earth regardless of background, nationality or culture? What effect would that have?

Teacher's Note:
Examples of commonalities might include:

- Having a certain number of brothers / sisters, or any siblings
- Being in the same school/year
- Having the same eye color or hair color
- Being from the same area or street
- Sharing a birthday month/year
- Liking a particular sport or sports team / music or band / book or author
- Having been to a particular country / place in Ireland
- Liking or disliking the same subject in school
- Being concerned about the same social and political issues like mental health or climate change
- Liking or hating certain foods
- Having a pet
- Owning a bicycle
- Being scared of the same things e.g. spiders, elevators, flying
- Character traits like being prone to worry, being an optimist etc.

Session 2, Activity 3 Responding with Empathy

Type of Activity: Skit, Group Work

Materials: *Situation Cards*, Learning Journals, Writing Utensils

Activity Objective(s): To explore the different ways in which people can respond with empathy in specific situations.

Method:

1. Copy the *Situation Cards* and cut them apart.
2. Divide the students into 5 groups and give each group a different *Situation Card* and a large sheet of paper, and a marker.
3. Explain that each group has 10 minutes to write down on page 5 of their Learning Journals at least three different ways they might respond with empathy to the situation card you gave them.
4. Students should then create a short skit using some or all their responses. Remind them to consider things from the point of view of the person at the center of the scenario.
5. Walk amongst the class prompting and helping if necessary.
6. Ask each group to act out the skit for the rest of the class at the front of the room.
7. After each group has finished, ask the observing students to list the responses they were showcasing. Ask the other groups if they can come up with any other ways of responding with empathy in that situation.
8. After the final group has presented, lead a class discussion about the activity using the following questions:
    - What ways of demonstrating empathy do you think were particularly effective?

- Are different responses needed in different circumstances?
- What are the consequences of showing empathy?

Session 2, Activity 4 Someone Else's Shoes

Type of Activity: Role play, Game

Materials: Photographs (*Many free to use photographs can be searched for online. For example, if you search Google Images and use the Tools option to filter your search for "labeled for reuse" images)*, One pair of shoes, Music, Music Player

Activity Objective(s): To practice imaginative perspective-taking.

Method:

1. Explain to the students they are going to take part in a perspective-taking activity and explain that perspective-taking is a way of stepping into another person's shoes to try and see the world from their point of view.
2. Ask students to stand in a wide circle.
3. Place the pair of shoes somewhere around the circle, in front of one of the students.
4. Explain to students that this is a version of musical chairs. They will walk in a circle until they hear the music stop.
5. The person who stops nearest to the pair of shoes will be given a photograph. They are asked to step into the shoes of one person in the photograph. They choose who, but it cannot be the same as another person if you repeat photographs. They should tell that person's story in the first person ("My name is…", "I am…"). Explain that there is no right or wrong story, but they should try their best to imagine the person and describe their situation.
6. Choose one photograph and demonstrate an example for the class.
7. Ask students to hold the picture facing outwards while they are telling the story so that the rest of the class can see it.
8. Continue the activity as long as you feel is needed, then lead the class in a discussion, guided by the following questions:
    - How did it feel to put yourself in someone else's shoes?
    - Did you feel empathy for the person when you were telling their story?
    - Did you feel empathy when you heard the stories?

Session 2, Activity 5 Perspective-taking and Conflict

Type of Activity: Role play, Group Work

Materials: *Scenario Cards,* writing utensils, paper

Activity Objective(s): To highlight the importance of perspective-taking to resolving conflict.

Method:

1. Photocopy the *Scenario Cards* and cut them apart. You might prefer to change the character's names/genders, depending on the profile of your group.
2. Divide students into groups of four and give each group one of the *Scenario Cards.*
3. Each group of four is to divide into pairs. Ask the pairs to prepare a role-play based on the scenario they have been given. The first pair is to role-play a situation of conflict, where both characters put forward their own positions forcefully. The second pair is to role-play a situation in which the characters attempt to see things from each other person's perspective: they listen to one another and try to understand each other's thoughts and feelings.
4. Give the class 10 minutes to prepare their role-plays and to act them out within their group.
5. Bring the class together and ask some of the groups to act out their role-plays in front of the class, so that each scenario is covered, whether it be as a conflict or as taking-perspectives.
6. Discuss the activity with the group, using the following questions:
    - How important is perspective-taking to resolving conflict?
    - Did the pairs who practiced perspective-taking feel empathy for the other person?
    - How can you apply perspective-taking to your own lives? Give examples of how you might do this.

Session 2, Activity 6 Befriending Meditation

Type of Activity: Mindfulness Meditation

Materials: *Befriending Meditation Script*, Music *(optional)*, Music Player *(optional)*

Activity Objective(s): To cultivate feelings of compassion for others using mindfulness meditation.

Method:

1. Allow the students to seat themselves comfortably in their chairs with their hands on their knees or in their lap or to lie on the floor if they would prefer.
2. Turn on meditation music *(optional)*.
3. Guide students through the meditation using the *Befriending Meditation Script*.
4. Once the meditation is complete, lead a class discussion using the following questions:
    - How did it feel to extend compassion to yourself? Why is this important when practicing empathy?
    - How did it feel to extend compassion to people you knew?
    - How did it feel to extend compassion to strangers and all living beings?
    - How might a regular meditation practice like this would increase your empathy and compassion for others?

5. Inform students that a version of this meditation can be found online at http://franticworld.com/free-meditations-from-mindfulness/ if they want to practice on their own.

Session 2, Take Home Activities

For the next session, students should:

- Practice responding with empathy at least once (if not twice) during the week. Record your experience(s) on page 6 of your Learning Journal.
- Read about SMART Goals starting on page 7 of your Learning Journal.
- Read *Six Habits of Highly Empathetic People* starting on page 9 of your Learning Journal.

Session 3

Learning to Work with Other Personalities, Empathy and Stereotypes, Directing Empathy toward Social Issues

Agenda

6:00pm - 6:15pm: Announcements / Review Homework
6:15pm - 6:45pm: Warm-up: Giant Steps
6:45pm - 7:30pm: Personality Compass
7:30pm - 7:50pm: Setting Empathy Goals
7:50pm - 8:00pm: Wrap-up / Homework Review

Session 3 Summary and Objectives

Finding commonalities and taking the perspective of others is easier if you have tools to work with. While people cannot be shoved into categories, sometimes it helps to know what personality type someone leans toward in order to understand how to overcome barriers to getting along. The activity in this session, "Personality Compass" allows students to learn some general personality traits identified by the points on a compass. Students then brainstorm tools to help them work with individuals in their direction category, even if their personality traits can cause conflict. Then students to reflect on barriers to empathy with a focus on one of the most persistent barriers to feeling empathy: stereotypes and prejudices. The first activity asks students to identify stereotypes about certain marginalized groups. The second activity allows students to debunk those stereotypes and consider how stereotypes are a barrier to empathy. Finally, students look at social issues and the role that empathy plays in understanding the experiences of other economic, social, and ethnic groups both nationally and internationally. It enables students to recognize the connection between empathy and social action.

On completion of this session students will:

- Practice perspective-taking and understand its importance to cultivating empathy.
- Identify that all humans are different, and while they cannot be put into strict categories, there are techniques you can learn to help you work better with others.
- Identify the role music can play in promoting empathy.
- Identify barriers to empathy and reflect on overcoming these.
- Challenge stereotypes and prejudices, a key barrier to empathy.
- Examine social exclusion in their local communities and the wider world.
- Explain how putting a human face on collective suffering and social issues will enable them to develop empathy for those who are suffering.

Session 3, Activity 1 Giant Steps / Social Exclusion

Adapted from "Giant Steps" (Barrett & Richardson, 2007)

Type of Activity: Perspective taking

Materials: *Giant Steps Role Cards*

Activity Objective(s): To develop empathy for individuals and groups affected by social exclusion.

Method:

1. Copy and cut apart the *Giant Steps Role Cards*.
2. Explain what is meant by *social exclusion*. Social exclusion occurs when people are denied resources, rights and the ability to participate in the normal relationships and activities, which are available to the majority of people in a society. Being excluded from education, work, the political system, a good living environment, and denied access to decent health care are all forms of social exclusion. One definition is "a process which pushes people out to the edge of society and distances them further and further from the chance of a job or an adequate income, from social and educational opportunities, from social and community networks and from power and decision-making" (Barrett & Richardson, 2007, p. 8). As can be seen from this definition, social exclusion is very closely linked to economic disadvantage and poverty which often excludes people from resources, rights, and participation in society which others take for granted.
3. Give each participant a *Giant Steps Role Card*. Be sensitive to the individual circumstances of your class. If you feel that certain students should not receive certain cards, exclude these cards altogether.
4. Ask students to read their *Giant Steps Role Card* and to enter into their roles. They should think about the character's details: who they are, where they live, how many are in their family, what kind of life they have, and whether they feel as though they belong in their community, school, family, etc.…
5. Ask students to line up on one side of the room with their backs against the wall. Ensure that they line up in random order, so that each person will move a greater or lesser distance than the person beside them.
6. Explain that you are going to read a series of statements. Students should take a giant step forward if they can do that thing quite easily or if the statement fully applies to them. They should take a small step if they can do it but with difficulty or if it applies to them a little bit. They should not move if it does not apply to them.
7. Read the statements below one at a time:
    - You will stay in school until you are 18.
    - You will go to college when you finish school.
    - You can live at home with your family.
    - When you are sick you can go to the doctor easily.
    - You have a secure home.
    - You feel like you belong.
    - You have enough to eat and drink.

- You like living where you live; it's a nice, clean environment.
- You get involved in things happening in your school and local community.
- You get plenty of extra help and support whenever you need it.
- You can be yourself without being made fun of or made feel different.
- You are looking forward to your life ahead and your future is pretty secure.
- You can easily socialize with your friends.
- You get most things that you ask for at home, like clothes, shoes, books, spending money, etc.

8. Once you have read all the statements, discuss the activity with the class using the following questions:

- (Have them raise their hands) Who felt privileged and who did not? Why or why not?
- For those who had the role card of a privileged person, how did that feel?
- For those who had the role card of someone suffering from social exclusion, how did that feel?
- Is it possible to be privileged and still not take a giant step forward for each of the questions? Why might this be the case for some of our characters?
- How did you feel when others beside you were moving ahead or being left behind?
- What role can empathy play in helping to combat social exclusion?
- What can we do to combat social exclusion?

Session 3, Activity 2 Personality Compass

Adapted from Compass Points: North, South, East, and West - An Exercise in Understanding Preferences in Group Work. (2017). In *School Reform Initiative*.

Type of Activity: Personality Matrix, Brainstorm, Discussion, Group Work

Materials: *Vocabulary Words* worksheet, four directional cards, Tape

Activity Objective(s): To help students define their direction (personality) type and determine the traits of other directions (personality) types. To discover tools to aid in working with others from different categories.

Method:

1. Make copies of the *Vocabulary Words* worksheet and *"Are you more North, East, South, or West?"* Worksheet (1 per each of your students). Print and hang up the four directional cards in the order of a compass around the classroom.
2. Explain to the class that a personality compass separates personality types into the four directions of a compass. This session is to help them determine what their personality direction is and what it means, and learn the same about others.
3. Pass out the *Vocabulary Words* worksheet and have the students circle the words that best describe them, choosing only one per set.
4. When they finish, have them add up the letters they circled, and write the numbers on the *"Are you more North, East, South, or West"* worksheet. Then they should write whichever letter has the most and least words circled to tell them which direction they are. (If someone has the most a's they are a North, b's they are a West, c's they are an East, and d's they are a South.)
5. Walk through each of the four direction types with the students. Show each card and talk about the traits of the animals depicted. Bison represent the North because they are strong and

powerful. Bears represent the East because they prepare for the winter and hibernate, rising in the spring to new ideas. Eagles represent the West because they fly high over everything, thus seeing the big picture. Wolves represent the south because they are pack animals that work well together. You can find more information about these directions on the corresponding directional cards.

6. Once you have discussed each direction and its traits, have the students get into groups based on their direction, and answer the in-class questions on page 11 of their Learning Journals.
7. Have each directional group share their responses to the in-class questions with the rest of the class and discuss them as a class.

Session 3, Activity 3 Setting Empathy Goals

The session asks students to create individual empathy goals, relevant to their own lives. This activity encourages reflection on everything they have learned so far, and aims to cultivate the on-going practice of empathy in their lives.

Learning Objectives:

At the end of this session, students will be able to:

- Outline how they can develop empathic habits and set relevant, personal and "SMART" Empathy Goals.

Type of Activity: Creativity, Goal-Setting

Materials: Colored Paper, Art Materials, Learning Journal, Whiteboard, Markers

Activity Objective(s): Students will identify the specific ways in which they can become more empathetic and practice empathy daily. Students will develop "SMART" goals that will help them to feel encouraged to develop and practice empathy on an ongoing basis.

Method:

1. Explain to students that they are going to create their own personal 'Empathy Goals'.
2. Take students through how to create "SMART" Goals on page 9 through 10 of their Learning Journals and demonstrate one with the class on a whiteboard.
3. Give students time to read the 'Six Habits of Highly Empathic People', on page 11 to 12 of their Learning Journals. Alternatively, if you have the resources, there is a video based on the *Six Habits of Highly Empathic People* at https://www.youtube.com/watch?v=hNEuEO94J1o .
4. Have the students read page 13 in their Learning Journals.
5. Provide students with a sheet of colored paper and allow them to write out their goals, decorating the poster using art materials.
6. Suggest that they display the list somewhere in their homes to remind them of their goals.
7. Lead a discussion with the class on their goals, using the following questions:
    - Why should we practice empathy in our lives?
    - What positive outcomes arise when we begin to apply empathy to our relationships?
    - How does empathy help society to thrive?

Session 3, Take Home Activities

For the next session, students should:

- Answer the Personality Compass Reflection Questions on page 12 in you Learning Journals.
- Complete the Personal Empathy Goals Worksheet on page 13 of your Learning Journals.

Session 4

Stereotypes, the Human Face, and Post-Test

Agenda

6:00pm - 6:15pm: Announcements / Review Homework
6:15pm - 6:30pm: Warm-up: Blasting Stereotypes
6:30pm - 7:00pm: The Human Face
7:00pm - 8:00pm: Empathy Post-Test

Session 4, Activity 1 Blasting Stereotypes

Adapted from 'Stereotype blasters' (Jacketti, 2013).

Type of Activity: Debate, Role Play, Critical Thinking

Materials: *Stereotype Cards*, box or bag to put cards in

Activity Objective(s): To challenge and debunk everyday stereotypes.

Method:

1. Copy the *Stereotype Cards* and cut them apart.
2. Place the *Stereotype Cards* in a box or bag.
3. Explain to students that they might be asked to take the side of something they do not necessarily agree with but the idea is to challenge stereotypes a lot of people commonly hold.
4. Ask students to come to the front of the room and draw out one *Stereotype Card*.
5. They must read out what is on the card and argue against it in 60 seconds using examples or situations.
6. Discuss the performance with the class, using the following questions as a guide:
    - What was the stereotype that was being debunked?
    - Is this a stereotype you have heard of before? (Have the class raise their hand if they have or have not).
7. When the time is up, the next participant goes up to select their card.
8. Repeat as many times as you feel are needed, then discuss the following questions with the class:
    - How did it feel to challenge stereotypes? Why?

- How can we challenge stereotypes and prejudice in our daily lives?
- Is it ever ok to judge someone? When and why?
- How can you tell when you are judging someone based on a stereotype or based on his or her individual personality?

Session 4, Activity 2 The Human Face

Type of Activity: Perspective-taking, Creative Writing, Art
Materials: *Scenario* Cards, Paper, Writing Utensils, Art materials, Learning Journals

Activity Objective(s): To humanize individuals affected by wider social issues to increase empathy for these groups.

Method:

1. Copy the *Scenario Cards* and cut them apart.
2. Divide the class into four groups. Hand out one of the four *Situations* to each group.
3. Explain that they are going to read the scenario on their card and put a human face on the issue.
4. Ask them to imagine an individual existing in those circumstances and to describe that person's experience. Encourage them to imagine what the individual looks like, to give them a name, and to imagine as much detail as they can with regard to the conditions in which they are living. They can approach the exercise however they would like, but everyone in the group must contribute in some way. For example, one person might like to write their piece as a first person narrative ("My name is…") while another writes an imaginary interview, and the third sketches or draws the person and his or her environment.
5. Ask them to fill out the questions on page 14 of their Learning Journals to help them prepare.
6. Allow students to work on their project. Encourage them to work collaboratively, and get help and ideas from one another.
7. Read each of the scenarios and ask for volunteers to show or tell their "human face".
8. Lead a class discussion about the activity using the following questions:
    - Did you feel empathy for the person you imagined?
    - Is putting an individual human face on global issues important to activating empathy for large groups?
    - What impact can individual stories have in promoting an active response or social action?

APPENDIX E

FREQUENCY AND BIVARIATE ANALYSIS OF EACH VARIABLE AND DEMOGRAPHICS, AND TOTAL EMPATHY QUOTIENT SCORES

Age and Scores on the Pre-Test and Post-Test

	0-32: Lower than average ability for empathetic responses.		33-52: Average ability for empathetic responses.		53-63: Above average ability for empathetic responses.		64-80: Very high ability for empathetic responses.	
Age Range (years)	Pre-Test (n = 111)	Post-Test (n = 92)	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
18-19	5.4%	2.2%	21.6%	21.7%	1.6%	6.5%	0.9%	0.0%
20-21	10.8%	6.5%	36.0%	32.6%	2.7%	4.3%	0.9%	2.2%
22-25	0.0%	0.0%	14.4%	17.4%	1.8%	4.3%	0.0%	0.0%
25 and Up	0.9%	0.0%	2.7%	2.2%	0.0%	0.0%	1.8%	0.0%

Pre x^2 = .058; Post x^2 = .922

Gender and Scores on the Pre-Test and Post-Test

	0-32: Lower than average ability for empathetic responses.		33-52: Average ability for empathetic responses.		53-63: Above average ability for empathetic responses.		64-80: Very high ability for empathetic responses.	
Gender	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Male	9.0%	5.4%	24.3%	28.3%	0.0%	3.3%	0.0%	0.0%
Female	8.1%	8.7%	50.5%	73.9%	6.3%	15.2%	1.8%	2.2%

Pre x^2 = .403; Post x^2 = .369

Race and Scores on the Pre-Test and Post-Test

	0-32: Lower than average ability for empathetic responses.		33-52: Average ability for empathetic responses.		53-63: Above average ability for empathetic responses.		64-80: Very high ability for empathetic responses.	
Race	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
White	12.7%	6.6%	47.3%	46.2%	6.4%	11.0%	1.8%	2.2%
Non-White	4.5%	2.2%	27.3%	27.5%	0.0%	4.4%	0.0%	0.0%

Pre x^2 = -.187; Post x^2 = -121

Comparing ability to define empathy and total empathy quotient scores

	0-32: Lower than average ability for empathetic responses.		33-52: Average ability for empathetic responses.		53-63: Above average ability for empathetic responses.		64-80: Very high ability for empathetic responses.	
Score	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Below Average	0.9%	0.0%	1.8%	2.2%	0.9%	0.0%	0.0%	0.0%
Average	10.8%	0.0%	36.9%	12.0%	0.9%	2.2%	0.0%	14.1%
Above Average	5.4%	8.7%	36.0%	59.8%	4.5%	13.0%	1.8%	2.2%

Pre x^2 = .159; Post x^2 = .844

Frequencies in scores in the ability to perceive hidden emotions

Perceive Score	Below Average	Average	Above Average	Mean	Std. Dev.
Pre-Test (n = 111)	13 (11.7%)	72 (64.9%)	26 (23.4)	1.12	0.584
Post-Test (n = 92)	3 (3.3%)	63 (68.5%)	26 (28.3%)	1.25	0.505

α = 0.799

Frequencies in scores in the ability to recognize typical emotions in a situation

Perceive Score	Below Average	Average	Above Average	Mean	Std. Dev.
Pre-Test (n = 111)	27 (24.3%)	62 (55.%)	22 (19.8%)	0.95	0.666
Post-Test (n = 92)	14 (15.2%)	55 (59.8%)	23 (25%)	1.10	0.630

α = 0.575

Comparing Age and Ability to perceive hidden emotions

	Below Average		Average		Above Average	
Age Range (years)	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
18-19	4 (3.6%)	0 (0.0%)	22 (19.8%)	17 (18.5%)	7 (6.3%)	11 (12.05)
20-21	8 (7.2%)	2 (2.2%)	33 (29.7%)	33 (35.9%)	15 (13.5%)	7 (7.6%)
22-25	0 (0.0%)	1 (1.1%)	14 (12.6%)	11 (12.0%)	4 (3.6%)	8 (8.7%)
25 and Up	1 (0.9%)	0 (0.0%)	3 (2.7%)	2 (2.2%)	0 (0.0%)	0 (0.0%)

Pre x^2 = .523; Post x^2 = .246

Comparing Age and Ability to recognize typical emotions in a situation

	Below Average		Average		Above Average	
Age Range (years)	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
18-19	10 (9.0%)	4 (4.3%)	19 (17.1%)	15 (16.3%)	4 (3.6%)	9 (9.8%)
20-21	14 (12.6%)	8 (8.7%)	31 (27.9%)	23 (25.0%)	11 (9.9%)	11 (12.0%)
22-25	3 (2.7%)	2 (2.2%)	9 (8.1%)	15 (16.3%)	6 (5.4%)	3 (3.3%)
25 and Up	0 (0.0%)	0 (0.0%)	3 (2.7%)	2 (2.2%)	1 (0.9%)	0 (0.0%)

Pre x^2 = .544; Post x^2 = .589

Comparing Gender and Ability to perceive hidden emotions

	Below Average		Average		Above Average	
Gender	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Male	8 (7.2%)	1 (1.1%)	22 (19.8%)	25 (27.2%)	7 (6.3%)	8 (8.7%)
Female	5 (4.5%)	2 (2.2%)	50 (45.0%)	38 (41.3%)	19 (17.1%)	18 (19.6%)

Pre x^2 = .068; Post x^2 = .724

Comparing Gender and Ability to recognize typical emotions in a situation

	Below Average		Average		Above Average	
Gender	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Male	15 (13.5%)	7 (7.6%)	19 (17.1%)	22 (23.9%)	3 (2.7%)	5 (5.4%)
Female	12 (10.8%)	7 (7.6%)	43 (38.7%)	33 (35.9%)	19 (17.1%)	18 (19.6%)

Pre x^2 = .007; Post x^2 = .171

Comparing Race and Ability to perceive hidden emotions

	Below Average		Average		Above Average	
Race	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
White	10 (9.1%)	2 (2.2%)	48 (43.6%)	45 (49.5%)	17 (15.5%)	13 (14.3%)
Non-White	3 (2.7%)	1 (1.1%)	24 (21.8%)	18 (19.8%)	8 (7.3%)	12 (13.2%)

Pre x^2 = .766; Post x^2 = .222

Comparing Race and Ability to recognize typical emotions in a situation

	Below Average		Average		Above Average	
Race	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
White	17 (15.5%)	11 (12.1%)	40 (36.4%)	36 (39.6%)	18 (16.4%)	13 (14.3%)
Non-White	9 (8.2%)	3 (3.3%)	22 (20.0%)	18 (19.8%)	4 (3.6%)	10 (11.0%)

Pre x^2 = .307; Post x^2 = .384

Score for Ability to perceive hidden emotions compared to the pre-test and post-test

Total Score	0-32: Lower than average ability for empathetic responses.		33-52: Average ability for empathetic responses.		53-63: Above average ability for empathetic responses.		64-80: Very high ability for empathetic responses.	
Perceive Score	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Below Average	10 (9.0%)	0 (0.0%)	3 (2.7%)	3 (3.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Average	9 (8.1%)	7 (7.6%)	61 (55.0%)	52 (56.5%)	2 (1.8%)	4 (4.3%)	0 (0.0%)	0 (0.0%)
Above Average	0 (0.0%)	1 (1.1%)	19 (17.1%)	13 (14.1%)	5 (4.5%)	10 (10.9%)	2 (1.8%)	2 (2.2%)

Pre x^2 = .000; Post x^2 = .000

Score for Ability to recognize typical emotions in a situation compared to the pre-test and post-test

Total Score	0-32: Lower than average ability for empathetic responses.		33-52: Average ability for empathetic responses.		53-63: Above average ability for empathetic responses.		64-80: Very high ability for empathetic responses.	
Perceive Score	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Below Average	13 (11.7%)	5 (5.4%)	14 (12.6%)	9 (9.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Average	6 (5.4%)	3 (3.3%)	55 (49.5%)	49 (53.3%)	1 (0.9%)	3 (3.3%)	0 (0.0%)	0 (0.0%)
Above Average	0 (0.0%)	0 (0.0%)	14 (12.6%)	10 (10.9%)	6 (5.4%)	11 (12.0%)	2 (1.8%)	2 (2.2%)

Pre x^2 = .000; Post x^2 = .000

Frequencies in scores for the ability to respond to another's emotions

Understand Score	Below Average	Average	Above Average	Mean	Std. Dev.
Pre-Test	54 (48.6%)	43 (38.7%)	14 (12.6%)	0.64	0.698
Post-Test	44 (47.8%)	33 (35.9%)	15 (16.3%)	0.68	0.740

α = 0.700

Frequencies in scores for the ability to understand how someone feels during an interaction

Understand Score	Below Average	Average	Above Average	Mean	Std. Dev.
Pre-Test	19 (17.1%)	52 (46.8%)	40 (36.0%)	1.19	0.707
Post-Test	9 (9.8%)	45 (48.9%)	38 (41.3%)	1.32	0.645

α = 0.556

Comparing Age and Ability to respond to another's emotions

	Below Average		Average		Above Average	
Age Range (years)	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
18-19	22 (19.8%)	18 (19.6%)	9 (8.1%)	6 (6.5%)	2 (1.9%)	4 (4.3%)
20-21	21 (18.9%)	14 (15.2%)	25 (22.5%)	21 (22.8%)	10 (9.0%)	7 (7.6%)
22-25	10 (9.0%)	11 (12.0%)	6 (5.4%)	5 (5.4%)	2 (1.8%)	4 (4.3%)
25 and Up	1 (0.9%)	1 (1.1%)	3 (2.7%)	1 (1.1%)	0 (0.0%)	0 (0.0%)

Pre x^2 = .114; Post x^2 = .176

Comparing Age and Ability to understand how someone feels during an interaction

	Below Average		Average		Above Average	
Age Range (years)	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
18-19	4 (4.5%)	1 (1.1%)	18 (16.2%)	12 (13.0%)	10 (9.0%)	15 (16.3%)
20-21	13 (11.7%)	7 (7.6%)	23 (20.7%)	22 (23.9%)	20 (18.0%)	13 (14.1%)
22-25	0 (0.0%)	0 (0.0%)	10 (9.0%)	10 (10.9%)	9 (7.2%)	10 (10.9%)
25 and Up	1 (0.9%)	1 (1.1%)	1 (0.9%)	1 (1.1%)	2 (1.8%)	0 (0.0%)

Pre x^2 = .330; Post x^2 = .061

Comparing Gender and Ability to respond to another's emotions

	Below Average		Average		Above Average	
Gender	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Male	22 (19.8%)	16 (17.4%)	12 (10.8%)	14 (15.2%)	3 (2.7%)	4 (4.3%)
Female	32 (28.8%)	28 (30.4%)	31 (27.9%)	19 (20.7%)	11 (9.9%)	11 (12.0%)

Pre x^2 = .247; Post x^2 = .574

Comparing Gender and Ability to understand how someone feels during an interaction

	Below Average		Average		Above Average	
Gender	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Male	11 (9.9%)	4 (4.3%)	18 (16.2%)	18 (19.6%)	8 (7.2%)	12 (13.0%)
Female	8 (7.2%)	5 (5.4%)	34 (30.6%)	27 (29.3%)	32 (28.8%)	26 (28.3%)

Pre x^2 = .015; Post x^2 = .648

Comparing Race and Ability to respond to another's emotions

	Below Average		Average		Above Average	
Race	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
White	31 (28.2%)	25 (27.5%)	31 (28.2%)	24 (26.4%)	13 (11.8%)	11 (12.1%)
Non-White	23 (20.9%)	19 (20.9%)	11 (10.0%)	8 (8.8%)	1 (0.9%)	4 (4.4%)

Pre x^2 = .024; Post x^2 = .206

Comparing Race and Ability to understand how someone feels during an interaction

	Below Average		Average		Above Average	
Race	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
White	14 (12.7%)	7 (7.7%)	33 (30.0%)	31 (34.1%)	19 (25.5%)	22 (24.2%)
Non-White	5 (4.5%)	2 (2.2%)	19 (17.3%)	14 (15.4%)	11 (10.0%)	15 (16.5%)

Pre x^2 = .596; Post x^2 = .490

Score for ability to respond to another's emotions compared to the Pre-Test and Post-Test

Understand Score	0-32: Lower than average ability for empathetic responses.		33-52: Average ability for empathetic responses.		53-63: Above average ability for empathetic responses.		64-80: Very high ability for empathetic responses.	
	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Below Average	13 (11.7%)	5 (5.4%)	40 (36.0%)	35 (38.0%)	1 (0.9%)	4 (4.3%)	0 (0.0%)	0 (0.0%)
Average	6 (5.4%)	2 (2.2%)	35 (31.5%)	27 (29.3%)	2 (1.8%)	3 (3.3%)	0 (0.0%)	1 (1.1%)
Above Average	0 (0.0%)	1 (1.1%)	8 (7.2%)	6 (6.5%)	4 (3.6%)	7 (7.6%)	2 (1.8%)	1 (1.1%)

Pre x^2 = .000; Post x^2 = .007

Score for ability to understand how someone feels during an interaction compared to the Pre-Test and Post-Test

Understand Score	0-32: Lower than average ability for empathetic responses.		33-52: Average ability for empathetic responses.		53-63: Above average ability for empathetic responses.		64-80: Very high ability for empathetic responses.	
	Pre-Test (n = 111)	Post-Test n = 92)	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Below Average	11 (9.9%)	4 (4.3%)	8 (7.2%)	5 (5.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Average	8 (7.2%)	2 (2.2%)	43 (38.7%)	42 (45.7%)	1 (0.9%)	1 (1.1%)	0 (0.0%)	0 (0.0%)
Above Average	0 (0.0%)	2 (2.2%)	32 (28.8%)	21 (22.8%)	6 (5.4%)	13 (14.1%)	2 (1.8%)	2 (2.2%)

Pre x^2 = .000; Post x^2 = .000

Frequencies in scores for ability to separate one's emotions from another's emotions

Differentiate Score	Below Average	Average	Above Average	Mean	Std. Dev.
Pre-Test	18 (16.2%)	68 (61.3%)	25 (22.5%)	1.06	0.622
Post-Test	11 (12%)	58 (63%)	23 (25%)	1.13	0.597

$\alpha = 0.636$

Comparing Age and Ability to separate one's emotions from another's emotions

	Below Average		Average		Above Average	
Age Range (years)	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
18-19	8 (7.2%)	2 (2.2%)	16 (14.4%)	16 (17.4%)	9 (8.1%)	10 (10.9%)
20-21	9 (8.1%)	7 (7.6%)	35 (31.5%)	28 (30.4%)	12 (10.8%)	7 (7.6%)
22-25	1 (0.9%)	2 (2.2%)	13 (11.7%)	12 (13.0%)	4 (3.6%)	6 (6.5%)
25 and Up	0 (0.0%)	0 (0.0%)	4 (3.6%)	2 (2.2%)	0 (0.0%)	0 (0.0%)

Pre $x^2 = .348$; Post $x^2 = .484$

Comparing Gender and Ability to separate one's emotions from another's emotions

	Below Average		Average		Above Average	
Gender	Pre-Test	Post-Test	Pre- Test	Post-Test	Pre- Test	Post-Test
Male	11 (9.9%)	6 (6.5%)	22 (19.8%)	24 (26.15)	4 (3.6%)	4 (4.3%)
Female	7 (6.3%)	5 (5.4%)	46 (41.4%)	34 (37.0%)	21 (18.9%)	19 (20.7%)

Pre $x^2 = .008$; Post $x^2 = .057$

Comparing Race and Ability to separate one's emotions from another's emotions

	Below Average		Average		Above Average	
Race	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
White	12 (10.9%)	7 (7.7%)	48 (43.6%)	39 (42.9%)	15 (13.6%)	14 (15.4%)
Non-White	6 (5.5%)	4 (4.4%)	20 (18.2%)	18 (19.8%)	9 (8.2%)	9 (9.9%)

Pre x^2 = .757; Post x^2 = .800

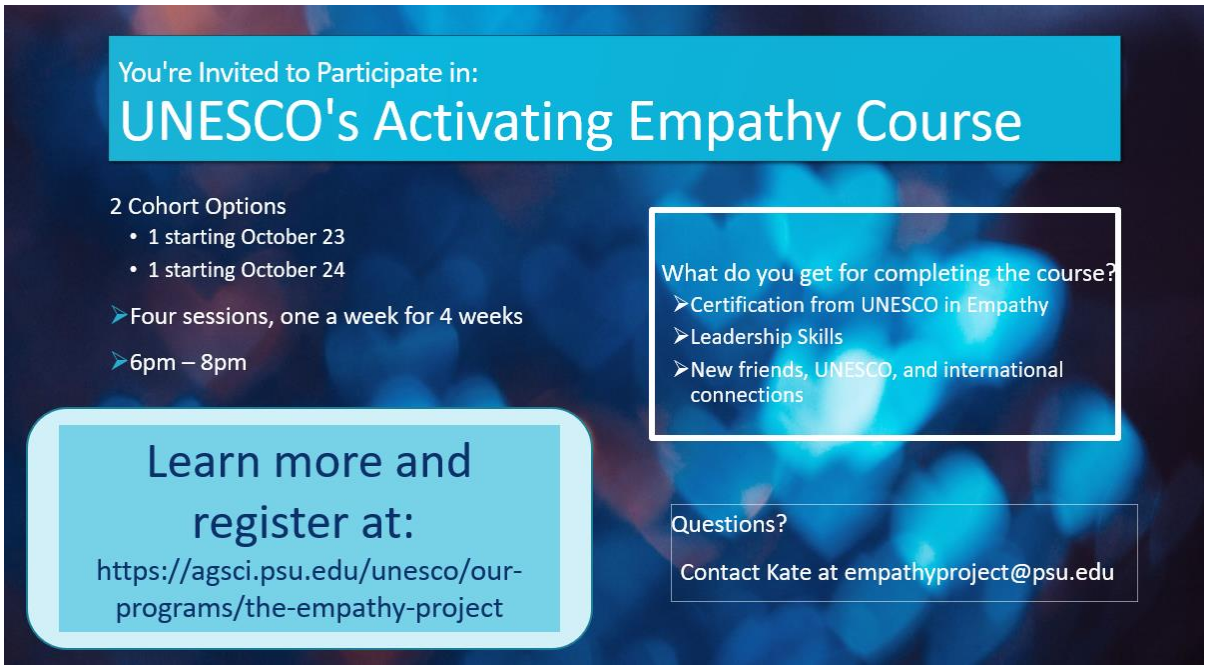
Score for ability to differentiate oneself from others compared to the Pre-Test and Post-Test

Total Score	0-32: Lower than average ability for empathetic responses.		33-52: Average ability for empathetic responses.		53-63: Above average ability for empathetic responses.		64-80: Very high ability for empathetic responses.	
Differentiate Score	Pre-Test (n = 111)	Post-Test (n = 92)	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Below Average	9 (8.1%)	3 (3.3%)	9 (8.1%)	8 (8.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Average	9 (8.1%)	4 (4.3%)	55 (49.5%)	47 (51.1%)	4 (3.6%)	7 (7.6%)	0 (0.0%)	0 (0.0%)
Above Average	1 (0.9%)	1 (1.1%)	19 (17.1%)	13 (14.1%)	3 (2.7%)	7 (7.6%)	2 (1.8%)	2 (2.2%)

Pre x^2 = .000; Post x^2 = .006

APPENDIX F

RECRUITMENT FLYER AND STUDENT COMPLETION CERTIFICATE



United Nations Educational, Scientific and Cultural Organization

Certificate of Completion

Has completed the *Activating Empathy*, a course offered by UNESCO and Penn State University

November 13th, 2019

Dr. Mark Brennan
Professor and UNESCO Chair in Community, Leadership, and Youth Development

Mary Kate Berardi
Instructor and UNESCO Graduate Fellow

APPENDIX G

VITA OF AUTHOR

MARY KATE BERARDI

104 Timber Lane, State College, PA 16801
(484) 686-5740 · berardimk@gmail.com

SUMMARY STATEMENT

Dynamic and motivated scholar with a proven record of generating, delivering, and evaluating engaging academic programs for a diverse audience of students. Inspirational mentor with a passion for empowering youth. Adaptable and transformational leader with experience building a college academic department from the ground up. Versatile worker with the ability to build relationships with colleagues across all levels of an organization while also forming beneficial partnerships with communities outside of the organization.

RESEARCH INTERESTS

- Empathy Education
- Youth Leadership Development
- Curriculum Development and Delivery
- Education Program Evaluation
- Non-Formal Educational Program Development and Delivery
- Environmental Education

EDUCATION

Ph.D., Agricultural and Extension Education, 2020
The Pennsylvania State University, University Park, Pennsylvania
Dissertation: *What are the most effective components of empathy education for undergraduate students to increase their empathy levels?*
Dr. Mark Brennan, Chair

- Areas of specialization: curriculum development and delivery, program evaluation, program design and delivery

Master of Science, Agricultural and Extension Education, 2009
The Pennsylvania State University, University Park, Pennsylvania
Thesis: *Parental Involvement in Non-Formal Education*
Dr. John Ewing, Chair

Bachelor of Science, Major: Agricultural Science, Minor: Agribusiness Management, 2008
The Pennsylvania State University, University Park, Pennsylvania

PROFESSIONAL APPOINTMENTS

UNESCO Fellow Community, Leadership, and Youth Development December 2016 - Present
Penn State University, University Park, Pennsylvania

Graduate Assistant in Education Outreach August 2018 - Present
WPSU, University Park, Pennsylvania

Program Leader March 2018 - Present
Millbrook Marsh Nature Center, State College, Pennsylvania

Assistant Supervisor March 2018 - February 2020
State College Area School District's Community Education Extended Learning (CEEL), State College, PA

Education Program Associate December 2016 – March 2018
Office of Science Outreach, Eberly College of Science, University Park, Pennsylvania

Program Director of School Programs & Summer Camp January 2014 – November 2016
Shaver's Creek Environmental Center, Petersburg, Pennsylvania

Agriculture Professor August 2012 – December 2013
San Jacinto College, Pasadena, Texas

Director March 2010 – August 2012
Monarch Academy, League City, Texas

Junior High Science and Math Teacher August 2010 – January 2012
St. Mary Catholic School, League City, Texas

Environmental Educator August 2006 – December 2009
Shaver's Creek Environmental Center, Petersburg, Pennsylvania

TEACHING EXPERIENCE

Post-Secondary Level Instructor

The Pennsylvania State University

Science Outreach Methods	Fall 2017
Project Learning Tree	Fall 2016, Spring 2019
Project WET	Fall 2016
Project WILD	Fall 2016
Project Food, Land, and People	Fall 2016
Creating a Children's Halloween Trail	Fall 2015, Fall 2016
Environmental Education	Spring 2014, Spring 2015

San Jacinto College

Livestock Evaluation	Fall 2012, Fall 2013

The Agricultural Industry	Fall 2012, Spring 2013
Computers in Agriculture	Fall 2012
Introductory Animal Science	Fall 2012, Spring 2013, Fall 2013

Professional Learning Facilitator

Everyday Empathy: Professional learning demonstrating empathetic practices, toward others and yourself, to use in everyday life.
Penn State Extension 2020

Empathy in Your Classroom: Professional development for K-12 classroom teachers, providing the Activating Empathy curriculum and a hands-on, activity based (even when virtual) approach to include empathy in daily classroom activities.
WPSU Penn State 2020
PA Family and Consumer Science Teachers 2020

Activating Empathy for Undergraduate College Students
5 Cohorts of PSU Undergraduate Students 2018, 2019

Activating Empathy for High School Students - Facilitator Training
Bradford High School Teachers 2020

RESEARCH EXPERIENCE

UNESCO Fellow Community, Leadership, and Youth Development December 2016 - Present
Penn State University, University Park, Pennsylvania
- Dissertation: *What are the most effective components of empathy education for undergraduate students to increase their empathy levels?*

Graduate Assistant in Education Outreach August 2018 - Present
WPSU, University Park, Pennsylvania
- Lead needs assessment of WPSU's coverage area as part of the Community and Education Services team
- Co-writing funding proposals for major station projects including Science-U@Home, Mental Health, and Early Childhood Education

Graduate Assistant August 2008 - December 2009
Agricultural and Extension Education Department, Penn State University, University Park, Pennsylvania
- Thesis: *Parental Involvement in Non-Formal Education*
- Assisted supervisor, Dr. John Ewing, build literature reviews and analyze statistics for a variety of research projects

LEADERSHIP EXPERIENCE

UNESCO Fellow Community, Leadership, and Youth Development December 2016 - Present
Penn State University, University Park, Pennsylvania

- Co-created The Empathy Project for Penn State University
- College of Agricultural Sciences Student Engagement Grant 2019-2020 *(accepted, received funding, 50% of responsibility)*

Assistant Supervisor March 2018 - May 2019
State College Area School District's Community Education Extended Learning (CEEL), State College, PA
- Supervise staff of 10 who oversee before and after school program for 60+ students at Ferguson Township Elementary School

Education Program Associate December 2016 – March 2018
Office of Science Outreach, Eberly College of Science, University Park, Pennsylvania
- Coordinated, scheduled, and managed science outreach education events, such as ENVISION: STEM Career Day for Young Women, Exploration-U: Family Science Night Events, Think Outside the Beaker, and Science-U Summer Camps

Program Director of School Programs & Summer Camp January 2014 – November 2016
Shaver's Creek Environmental Center, Petersburg, Pennsylvania
- Scheduled and coordinated daily onsite school programs for over 500 participants annually
- Trained, managed, guided and evaluated staff of 6-8 interns who taught environmental education lessons during school programs and summer camp
- Directed Discovery and Explorer Day Camps for over 360 campers and their families annually

Agriculture Professor August 2012 – December 2013
San Jacinto College, Pasadena, Texas
- Created brand new agriculture sciences department, doubling the number of students in the program from 2012 to 2013
- Expanded regional partnerships and connections for the college through outreach to the public that included agriculture based non-formal education programs
    - Including barn to house animals for livestock show team

GRANTS AND FUNDING

Sesame Street in Communities Grant for Teacher Professional Development 2020
WPSU, Proposal is in initial research phase, asking $10,000

At Home Learning Grant from The Hamer Foundation
2020
WPSU, Proposal is in initial research phase, asking $200,000

Science-U@Home Phase 3 2020 - 2021
WPSU, Proposal was paused in Letter of Inquiry Stage to be reopened in March 2020, asking $150,000
- Designed proposed education outreach programs
- Prepared budgets for education outreach portion

College of Agricultural Sciences Student Engagement Grant 2019 - 2020
Accepted, received funding, $2000

CONFERENCES (REFEREED) AND PRESENTATIONS

Berardi, M.K., Telenko, S.J., Henward, A.S. (2020, October) *PBS Kids Talk about Race and Racism Panel Discussion.* Member of a Panel Discussions for WPSU.

Berardi, M.K. (2020, June). *Empathy in the Classroom.* Presented at the Family and Consumer Science Teacher Summer Workshop, Professional Development Conference.

Berardi, M.K. (2020, June). *Everyday Empathy: Empathy techniques for your daily life.* Virtual Conference presented for Penn State Extension Employee Professional Development.

Berardi, M.K. (2020, March). *Activating Empathy: Empathy in everyday learning.* Presented at the Comparative and International Education Society Conference, Miami, FL.

Berardi, M.K. (2020, March). *Empathy in the Classroom.* Presented at the Innovative Schools Summit, Orlando, FL.

Berardi, M.K. (2019, November). *Can Screen Time Be Educational?.* Presented at the Local Interagency Council Professional Breakfast.

Berardi, M.K. (2018, February). *Activating Empathy: Empathy education in the classroom.* Accepted to Present at the 16th Annual Hawaii International Conference on Education (could not attend due to lack of funds).

Ewing, J.C., & **Berardi, M.K.** (2011, November). *Parental Involvement in Non-Formal Education.* Non-presenting author for the American Evaluation Association Conference, Anaheim, CA.

Ewing, J.C., & **Berardi, M.K.** (2011, September). *Parental Involvement in Non-Formal Education.* Non-presenting author for the North Central AAAE Conference, State College, PA.

PEER-REVIEWED JOURNAL PUBLICATIONS

Berardi, M. K., White, A. M., Winters, D., Dolan, P., Brennan, M., Thorn, K (2020). Rebuilding communities with empathy. Local Development & Society.

Berardi, M.K., & Brennan, M.A. (2020). In Search of a Common Understanding. Penn State Extension.

Brennan, M. A., & **Berardi, M. K.** (2020). Importance of Local Community Action in Shaping Development. Penn State Extension.

Jordan, M. K. (2011, November). Roads Less Traveled: Down to Earth. *Local Living*, 73.

Berardi, M. K., & Heilman, R. (2009). *Lights, camera, leadership* (Vol. 1). University Park, PA: Penn State University.

MEMBERSHIPS AND CERTIFICATIONS

National Science Teachers Association	2019
Red Cross First Aid/CPR	2018
Project WET Curriculum Facilitator	2014
Project WILD Curriculum Facilitator	2014
Project Learning Tree Curriculum Facilitator	2014
Project Food, Land, and People Curriculum Facilitator	2014
National Association for Interpretation	2006