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Pre-service teachers' empathy and cognitions: Statistical analysis of text data by graphical models [☆]

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Abstract

This research examines empathic dispositions of 178 pre-service teachers. We analyzed open ended responses to animated narrative vignette simulations (ANVs), which served as stimulated experimental situations depicting students in victim and perpetrator scenarios. Empathy was examined by addressing the following questions: (1) Do participants' responses differ over vignettes? (2) What is the dimensionality of the empathy construct? (3) Is word count an indicator of empathy? (4) Is there a dispositional effect? (5) To what extent do pre-service teachers express empathy? After the text responses of pre-service teachers were coded, log-linear and log-multiplicative association models, which have graphical representations, were used to analyze the data and to develop a context dependent measure of empathy. The results suggest that a single latent variable underlies the responses, and from our measurement model, very few teachers expressed empathy toward the victim in the ANVs.
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1. Introduction

The roots of empathy appeared over 250 years ago when German philosophers intellectualized (German aesthetics, *einfühlung*), and defined it as, an act of imaginatively stepping into another person's perspective. The perspective-taking of another also involves considering how things look from someone else's position as if one were an insider. While many have argued over whether empathy is affective, cognitive, or multidimensional, what is clear is that it involves a process of perspective-taking and the ability to share an affect (Eisenberg & Strayer, 1987). In this article, we will briefly define empathy, introduce the theory of teacher empathy and its meaning, and test the theory by applying cutting-edge latent variable modeling to a set of open-ended text based responses.

2. The concept of empathy

Since the early 18th century empathy has been theorized in fields of philosophy and more recently psychology (Davis, 1980, 1983; Eisenberg & Strayer, 1987; Hoffman, 2000; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). While philosophical roots drive the development of empathy as a theory, we will focus on some of the most recent theories involving empathy in the educational and psychology literature. Empathy has sometimes been described as a moral emotion that exists universally in many societies, and a phenomenon that we think, feel, and act on as we encounter victims of violence, accidents, subtle discrimination, and relational aggression. It can also be associated with feelings of joy, fear, excitement, and sadness (Zhou, Valiente, & Eisenberg, 2003). Regardless of the behavior that is expressed by others, empathy is something an individual feels as one encounters a situation (e.g., joy, pain) of another. The feelings that one may feel for another, is often associated with the same or similar experiences or situations that has occurred in one's own life (Hoffman, 2000).

Hoffman (2000) described empathy as involving an affective response with a focus on the other person more than one's self. While others have described empathy as a cognitive (Deutsch & Madle, 1975) or emotional process (Mehrabian & Epstein, 1972), more recent literature suggest that empathy is a multidimensional phenomenon with distinctions among its various attributes (e.g., personal distress, empathic concern, perspective-taking and fantasy; Davis, 1980, 1983). A vital aspect of the process involves perspective-taking and feeling. We would expect most individuals to have developed schemas for social perspective-taking by the time they become adults. Yet, snapshots of observations in schools would suggest otherwise.

Research involving peer relations reveal that most students are not empathic and that school personnel fail to provide empathic responses toward students who are victimized in schools (Craig, Henderson, & Murphy, 2000). For instance, Hakansson and Montgomery (2003) suggested empathy may include taking on the perspective of another individual such as mimicking another's actions. "The outcomes of empathy result from these processes, and may include the empathizer's affective responses, cognitive understanding, and helping behaviors" (Hakansson & Montgomery, p. 268). While Hakansson and Montgomery (2003) described empathy as a process, Eisenberg and others have described empathy as an emotional state of arousal, which originates from the understanding of uneasiness of someone else's experience (Eisenberg, Shea, Carlo, & Knight, 1991).