Understanding Empathy in Instructional Design

Hengtao Tang & Susan Porter-Voss

Empathy, the ability to vicariously imagine, understand, and emote another's perspective, has become an increasingly critical soft skill for instructional designers. However, theories about how instructional designers build empathy with users remain scarce. This article aims to trace the theoretical roots of empathy in instructional design practices and establish a solid understanding of empathy and empathic design in this setting.

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Introduction

Harper Lee (1960), Pulitzer prize-winning American novelist, once said, "You never really understand a person until you consider things from his point of view … Until you climb inside of his skin and walk around in it." This is the definition of empathy, despite its loose interpretation of the cognitive process. Empathy is the skill that allows us to react emotionally when confronted with the needs of others (Wilhelm & Bekkers, 2010). Empathy is a basic component of life and a basic component of social behavior, guiding the way in which we work together cooperatively and navigate challenges individually (Briggs, 2014; Fleming & Lovat, 2015).

The outbreak of the COVID-19 pandemic has resulted in a new wave of online education accompanying an increasing demand for efficient instructional designers to rapidly convert courses into online offerings. Particularly in such an era of uncertainty, empathy between instructional designers and learners becomes critical for improving online learning effectiveness. Emoting from learners' perspectives becomes an urgently needed competence for instructional designers. However, a sound understanding of empathy in learning design and technology settings is absent. Beyond understanding how empathy functions in instructional design, providing instructional strategies and guidelines for instructional design professionals to integrate empathy in their works is also necessary.

Therefore, the purpose of this article is to tap into the theoretical roots of empathic design and develop an understanding of empathy in learning design and technology settings. The following sections start with an overview of empathy and its components, followed by a review of empathy in instructional design settings. The remaining sections center on the discussion of strategies for fostering empathic designers.

Empathy

Empathy is a basic component of both longitudinal success and social behavior, guiding the way in which we function as a global culture (Briggs, 2014). The modern idea of empathy originated in the late nineteenth and early twentieth centuries, the product of a German term, *Einfuhlung* (Cuff et al., 2016). This phrase, coined by Robert Vischer, commonly applied to art and the aesthetic experience (Ganczarek et al., 2018). It came to be translated as "feeling into", denoting a projection of emotion beyond the self (Decety & Lamm, 2006; Goldie, 1999). This projection could be extended to human and nonhuman entities alike. For example, allowing connoisseurs of impressionism to fully appreciate the emotional connotations of exhibited work (Ganczarek et al., 2018). Within the parameters of social and behavioral science, empathy is typically considered the neural process of perceiving the emotional state of another and imagining a personal response based on that specific point of view (Goldie, 1999; Riess, 2017).

There is a consensus that empathy encompasses two aspects: cognitive empathy, which involves one's ability to construct a working model of others' emotional states, and affective empathy, which entails one's capacity of vicariously experiencing the feeling of others (Cuff et al., 2016; Lucas-Molina et al., 2018; Reniers et al., 2011). Both cognitive empathy and affective empathy can exist separately; however, it is the handling and placement of cognitive elements that produces the affective elements (Cuff et al., 2016; Lucas-Molina et al., 2018).

Empathy in Instructional Design

Empathy, defined as one's ability to understand others' perspectives and emotionally connect with them (Carmel-Gilfilen & Portillo, 2016), has become an increasingly critical soft skill for instructional designers. To build empathy with users, instructional designers apply empathic forecasting to predict users' cognitive and emotional reactions. Tracey and Hutchinson (2019) described that empathic forecasting occurs via "projecting goals in the future" and "emoting a vision of the future" (p. 1266). Specifically, projecting goals in the future allows instructional designers to envision various possible design options via imaging emotional and cognitive reactions towards each option of design through a learner's perspective (Hellström & Hellström, 2003). Instructional designers then verbally prototype and/or visually model the initial design based on the simulated learner experience (Kouprie & Visser, 2009; Tracey & Baaki, 2022). They

then refine the design in line with learner competence and preference. Additionally, emoting a vision of the future mainly focuses on developing an emotional resonance with learners (Wilson & Gilbert, 2005). Instructional designers begin by anticipating learners' concerns about interacting with the design and making informed revisions based on those predictions. They then predict the learners' level of comfort in navigating the revised design until they envision the learners feeling excited about the new design, which prompts them to use that version (Tracey & Hutchinson, 2019; Wilson & Gilbert, 2005).

Tracey and Hutchinson (2019) offered valuable insights into the temporal perspective of empathic design in digital education and suggested practical implications for enhancing the proficiency of instructional designers. A particularly important component of empathic design practices in instructional design settings is to combine the past (e.g., identify problems and the initial solution), the present (e.g., explore solutions), and the future (e.g., devise creative solutions) in a design (Kouprie & Visser, 2009). A temporal perspective of empathic design involves constant interplay between projection and reflection to devise the solutions that resonate with learner needs (Hellström & Hellström, 2003; Tracey & Hutchinson, 2019). Instructional designers project themselves through the learners' perspective and make assumptions about their cognitive and emotional reactions. Having a comprehensive understanding of learner characteristics and other contextual factors in a design problem (i.e., the past in design) is critical for instructional designers to build empathy with learners. When projecting goals into the future, instructional designers analyze how their empathic forecasting predicted the learner's experience. Specifically, instructional designers reflect upon an understanding of design problems and learner characteristics to explore the disparities between design prototypes and expected learner reactions. It is worthwhile to note that a temporal perspective of emotions posits that emotions change as learners react to contextual factors (Tang et al., 2018, 2019). Thus, instructional designers should simulate the emotional reactions in a dynamic manner rather than as an emotional status at a static point. Moreover, emoting a vision of the future combines instructional designers' understanding of "the present" and "the future" in design. By exploring the prototypes in learners' shoes (i.e., developing an understanding of the present), instructional designers seek to understand learners' affective perception and build an emotional resonance with them on the future design. In short, fostering instructional designers' competence of adopting a temporal perspective of empathic design is critical to enable them to build empathy with learners.

Furthermore, understanding the interplay between instructional designers' affective forecasting and empathic forecasting is important (Arditte Hall et al., 2018). Affective forecasting describes instructional designers' self-prediction of their own emotional reactions to a specific incident (Wilson & Gilbert, 2005). With empathic forecasting, instructional designers can adopt a learner's perspective to envision their emotions. Affective forecasting and empathic forecasting interplay when instructional designers attempt to build empathy with learners. In Kouprie and Visser's (2009) four-step empathic design model, instructional designers a) discover, b) immerse, and c) connect to learners' perspective, then d) detach from the imagined learners' situation and return to the role of instructional designers. Dissolving affective and empathic forecasting is necessary for instructional designers to precisely envision others' emotions and perspectives, thus devising efficient solutions.

Developing Empathic Designers

During the outbreak of the COVID-19 pandemic, many universities and schools chose to move all their courses online as a stop-gap method in response to campus closure. This abrupt change in course delivery format resulted in a significant demand for instructional designers to help efficiently convert the course online in a short time frame. Today, besides converting courses into their online alternatives, instructional designers are expected to understand the learners (e.g., the learners' preferences and challenges) and then emote from learners' standpoint to deliver effective instructional design products. Empathy is important for each phase of instructional design (Tracey & Hutchinson, 2019). Therefore, adding empathy as a key competence for graduates from instructional design degree programs is urgently needed. The rest of this section reviews several teaching strategies that may foster instructional design students' competence of developing empathy with their audiences and contexts, specifically, design thinking, experiential learning, and real-world problem solving.

Design Thinking

Design thinking is an approach to developing design projects/products in a five-phase process including empathy, definition, ideation, prototyping, and testing (Pande & Bharathi, 2020). By undertaking the process of empathizing, students can build empathy with customers and also teammates and understand the purpose of the design (Yu et al., 2019). During the process of definition development, students need to develop an effective representation of the problem which can further inform the following process of ideation (Gumina & Tang, 2021). Through ideation, students develop potential solutions to address the design problems. Usually, students work in groups to brainstorm various potential solutions and then figure out an appropriately executable one (Li et al., 2019; Wu et al., 2019). Building upon the outcome of the ideation, students produce a prototype that allows them to showcase their preliminary solutions and potential outcomes (Tang et al., 2021; Tsai & Wang, 2021). Once the prototype is generated, an iterative cycle of testing is performed to investigate the efficacy of the prototype and make further revisions based on the test results (Gumina & Tang, 2021; Ladachart et al., 2021; Tsai & Wang, 2021).

Empathy is the foremost step in the design thinking process (Tracey & Baaki, 2022). Accordingly, design thinking has been adopted in educational settings to foster student expertise of devising solutions responsive to the needs of the community and/or the audience (Dawbin et al., 2017; Henriksen et al., 2017; Tsai & Wang, 2021). For instance, Dawbin et al. (2017) found secondary school boys reinforced their empathy over social equity challenges related to supporting women who experienced domestic & family violence after attending a workshop using the design thinking approach. Design thinking explicitly integrates empathy, both cognitive and affective empathy, as a critical component of the design process where designers need to consider the problem from the perspective of the audience for whom the design is intended for (Cook & Bush, 2018; Lin et al., 2020).

Experiential Learning

Experiential learning considers learning to be process-oriented rather than outcome-oriented, especially as learners acquire knowledge by reflecting upon and internalizing their experience (Kolb, 2014). Integrating beyond-the-classroom learning experiences in the curriculum provides an opportunity for instructional design students to (a) encounter new experiences, (b) reflect on the inconsistencies between the experience and their current understanding, (c) generate new ideas, and then (d) apply ideas to solve authentic problems. Nursing educators have integrated experiential learning to improve students' cognitive and affective empathy with patients and their caring-ethics (Ter Beest et al., 2018; Vanlaere et al., 2010). Similarly, working on real-life projects directly relevant to themselves, instructional design students can benefit from beyond-the-classroom learning experiences through consolidating their commitment to their civic growth (e.g., cultural values, senses of identity) and developing connections to their local community (Giordano et al., 2015). Additionally, beyond-the-classroom learning experiences allow instructional design students to align their career aspirations with professional standards. Overall, experiential learning can provide instructional design students with opportunities for connecting learning with authentic needs of their local community and fostering their empathy towards the context and/or the audience.

Real-world Problem Solving

Rogers (1975) postulates that empathy can be developed over time and is to be fostered through authentic experiences. Maiorca et al. (2021) argue that empathy should be fostered through experiences that highlight the application of learning in authentic settings so that students can be aware of the connections between learning and real-world problem solving. Research has investigated whether and how community service-oriented learning experiences fostered student empathy in this setting. For example, Humphreys and Blenkinsop (2018) engaged students in an inquiry-based learning project of exploring a river nearby their community in order to develop students' empathy and ecological identity. Bush and Cook (2019) insisted that empathy is a vehicle for inspiring students to engage in solving authentic problems to "make the world a better place" (p. 49). Edelen et al. (2020) argued that empathy can be key to helping students connect with contexts that may otherwise be distant to them. In short, providing instructional design students with authentic problem-based learning becomes an opportunity to develop students' empathy towards solving real-life problems.

Conclusion

Overall, empathy is a fundamental skill for instructional designers (Humphreys & Blenkinsop, 2018; Korte et al., 2018). Empathy permeates instructional design and is important for each phase of the instructional design process. Therefore, supporting instructional designers as they foster empathic design capacities needs to be prioritized in professional training offered by instructional design programs. Understanding empathy in instructional design practices calls for advancement in its theories. Learning theories and instructional strategies such as design thinking, authentic problem-based learning, and experiential learning can facilitate the development of student empathy (Cook & Bush, 2018; Giordano et al., 2015; Humphreys & Blenkinsop, 2018).

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Hengtao Tang

University of South Carolina

Susan Porter-Voss