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Introduction

There is a distinction in management education between transactional and transformational leadership styles (Bass, 1998). Transactional leaders look at their workers as means to ends or cogs in a machine. Transformational leaders look at their workers and see people with wants, needs, and desires (Bass, 1991). Modern business school instructors want their students to become transformational leaders.

Transformational leadership is predicated on a leader's ability to establish a common understanding with others (Kellett, Humphrey & Sleeth, 2002). This bond, in turn, is predicated on the leader's proper application of cognitive empathy—the non-affective component of empathy. Cognitive empathy is better defined as the ability to simulate someone else's thought processes by seeing the world from their vantage point or putting yourself in someone else's shoes without actually having to feel their feelings (Davis, Luce & Kraus, 1994). Unfortunately, the coverage demands of the undergraduate business school curriculum often preclude identifying student's propensity for cognitive empathy and providing opportunities to develop it (Brown, Sautter, Littvay, Sautter & Bearnes, 2010). Working within an existing curriculum, we sought to elicit and capture a measure of cognitive empathy development by introducing the Stanford d.school's version of the Design Thinking process (Brown, 2008). Figure 1 shows a model of the Design Thinking process.

Figure 1: Stanford d.school's Stages of Design Thinking (Stanford d.school, 2012)
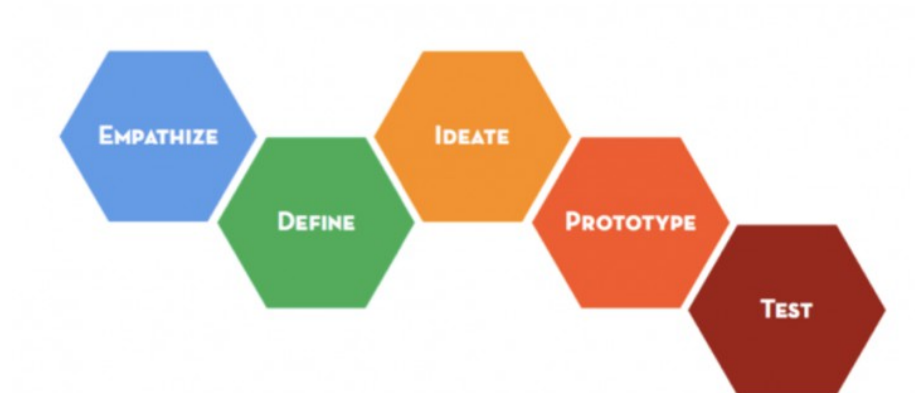
We hypothesized that introducing students to Design Thinking early in the semester would have a lasting impact on their development and displays of cognitive empathy later on.

Methods

62 undergraduate students enrolled in two sections of a business management course completed an optional class activity during the first week of the semester. 33 of the students were female. 46 of the students were in their second year of studies. The remaining students were in their third or fourth years.

During the fourth week of the semester, the course coordinator asked students to complete one of two versions of an optional activity. While all of the students within each section were assigned to the same activity condition, the instructor was blind to which section received each activity. The same instructor taught both sections and attempted to keep the sections as identical as possible.

The optional activities were delivered online via Learning Activity Management System (LAMS) sequences. LAMS allows course developers to sequence online activities and resources

for delivery to students (Ghiglione & Dalziel, 2007). The platform connects with the campus' Learning Management system (LMS) to archive students' participation in online quizzes, discussion forums, chat groups, and other assignments.

In the Management version of the LAMS activity, students viewed a series of texts and videos related to the principles of management (planning, organising, leading, and controlling). These principles formed the four pillars on which the course was built upon. In the Design Thinking version of the activity, students viewed a series of resources related to design thinking (empathy, defining the problem, ideating, prototyping, and testing). These concepts were not officially part of the course, but they provided a process for solving problems presented in the course. At the end of both sequences, students were asked to use the materials they had been provided to create a plan of action for a prospective student who was struggling with a management issue.

For the seventh week of the semester, students were required to submit a plan for addressing the ethical behaviour of either Nike or L'Oreal. Students were free to choose either company and select any ethically dubious decision the company had made in the recent past. All students were given the same assignment and grading guidelines.

During the final week of the semester, a researcher unaffiliated with the course approached students in both sections to voluntarily consent into the research study and complete a short survey to capture their demographic information and academic motivation.

After the end of the semester and receiving consent from the students to review their coursework, a researcher coded the plans for the presence of the design thinking and management terms. Additionally, the researcher coded the plans for displays of cognitive empathy. We operationalized the display of cognitive empathy as statements which referred a stakeholder's

perspective and explained how the conditions within the company could affect the stakeholder's reasoning.

Results

Analysis of the demographic data did not show any significant differences between conditions due to gender, age, academic motivation, or course grades. Therefore, we treated the two sections as equivalent. We also did not find any significant differences related to the grades students received for their plans, for the course as a whole, or the use of design thinking or management terms due to condition.

However, students in the Design Thinking condition displayed signs of cognitive empathy more often ($M = .29$, $SD = .46$) than students in the Management condition ($M = .06$, $SD = .24$), $t(60) = 2.5$, $p < .05$. Students in the Design Thinking condition also showed a higher rate ($M = .68$, $SD = .48$) of proposing ethics based education as a solution to unethical corporate behaviour than students in the Management condition ($M = .38$, $SD = .49$), $t(60) = 2.4$, $p < .05$.

Discussion

It is not concerning that students in the Design Thinking condition performed similarly to students in the Management condition. After all, the grading scheme did not preference design thinking. Even if the grading rubric did not distinguish them, students who were exposed to the Design Thinking process still provided more holistic remediation plans to address the unethical corporate actions in comparison to students who received a reinforcement of course content.

By incorporating an optional online assignment into an existing curriculum, the course coordinator managed to elicit and capture the spontaneous display of cognitive empathy from students without sacrificing class time or content coverage. The considered application of

cognitive empathy is important for transformational leadership. The generalizable nature of the Design Thinking process and the structure of the activity itself makes it transferable to other courses and content domains.

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