How can we teach design thinking online?

_TREO Talk Paper_

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Abstract

Design thinking is not new, but it has recently been embedded into teaching approaches through the work of Stanford d.school (d.school, 2018) and the consulting firm IDEO (IDEO, 2018), whose founder is considered an authority in human-centered design. A body of literature is also emerging in the last few years with countless applications of design thinking in various areas, especially product development, and more recently in education. However, while the literature describing design thinking is relatively mature as evidenced by various research, books and literature reviews (Gordon, 2018; Micheli, Wilner, Bhatti, Mura, & Beverland, 2018), its applications in teaching are emergent and, therefore, present an incredible open canvas for exploration.

While teaching the foundational concepts of design thinking may be linear, doing design thinking presents interesting challenges because this unequivocally team-based methodology and brainstorming works best in face-to-face and highly creative, non-linear environments. Therefore, its adaptation to online delivery and its effectiveness need to be further studied. As a pedagogical technique, design thinking is less prone to be easily encapsulated easily into an online environment. Nevertheless, emergent methodologies are taking ground, supported by online interactive collaborative technologies, and they are enabling the study of how to transfer this prototype-based approach into an online learning environment (Filatro, Cavalcanti, & Muckenberger, 2017).

This integration and growth of fluid and open-ended approaches into education fundamentally represents a challenge for online learning, and online team-learning in particular. If teaching is evolving into more nuanced, flexible and design-oriented pedagogical methods, how will online teaching evolve? How will educators be able to assess unstructured online team interaction? These are key questions that we are trying to answer in terms of pedagogical evolution and its effectiveness. Much attention in online team learning has been paid to structured team interaction processes that can be assessed through objective and automated criteria. For example, team engagement has been evaluated by counting the number of replies, participation frequency or, using social network analysis, by “centrality” and “betweenness” measures of team member communication. The key challenge of these methods is that in order to simplify measurements, they reduce the richness of the team interactions to well-defined learning outcomes.

This talk will review various examples of teaching design thinking both face-to-face and online and will discuss a number of opportunities and open challenges that are important to drive changes to pedagogy, to web-based collaboration tools, and to the expectations and demands of online learning.

References


