Chapter 3
Higher Education Transcendence Through Transdisciplinarity

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ABSTRACT

The future of higher educational institutions is in need of innovators, creative thinkers, problem solvers, and people who can envision transcending across disciplines into a transdisciplinarity environment that by its nature requires institutions of learning to identify the challenges that affect humanity and investigate and implement solutions throughout the life of those challenges, working continuously to iteratively improve upon yesterday’s solutions. Allowing the coexistence of old and new, being able to deal with change and disorder while explaining persistence and order requires practices that connect contextually things, people, and events that are distant and only partially congruent. Transdisciplinarity as a construct or framework can guide institutions of higher learning to break from outdated models and structures to form new ways of being that are fluid, heuristic, and holistic. Transperformative education can serve as a model to operationalize transdisciplinarity at the curricula, instructional, operational, and strategic level.

HIGHER EDUCATION TRANSCENDENCE THROUGH TRANSDISCIPLINARITY

Transdisciplinary education has its origins in the inexhaustible richness of the scientific spirit, which is based on questioning, as well on the rejection of all priori answers and certitude contradictory to the facts. At the same time, it revalues the role of deeply rooted intuition, of imagination, of sensitivity, and of the body in the transmission of knowledge. Universal sharing of knowledge – a necessity of our world – cannot take place without the emergence of a tolerance founded in a transdisciplinary attitude.

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Hence, our chapter is a literature review on transdisciplinary opportunities in higher education and will include a few cutting-edge ideas already taking place.

The everyday practice of educators and researchers find that it is extraordinarily complicated to overcome disciplinary limitations and to abandon the epistemological security of one’s own discipline (Blattel-Mink & Kastenholz, 2005). Therefore, it takes a specific type of learning institution to think transdisciplinarily, one that practices in transdisciplinary ways day in and day out. But our current higher education system could not be further from this idea. We are, with few exceptions, still teaching isolated subjects in isolated classrooms.

Jimenez-Eliaeson (2017) stated, “Education is in the midst of the innovation economy and there is tremendous pressure on cities, companies, and institutions to innovate and re-innovate at increasing speed” (p. 39). Transdisciplinary inquiry is characterized by a common orientation to transcend disciplinary boundaries and a desire to actively apply knowledge to the betterment of man and society (Bernstein, 2015). What do we mean by disciplinary boundaries? We agree with Nicolescu (2014) that disciplinary boundary is “the totality of the results – past, present, and future – obtained by the laws, norms, rules, and practices of a given discipline” (p. 189). This is important to note as we explore the gradation between disciplinary to transdisciplinarity. According to Harvard University (2004) transdisciplinarity refers to the highest level of integrated study, that which proposes the unity of intellectual frameworks beyond the disciplinary perspectives and points toward a potential to think in terms of frameworks, concepts, techniques, and vocabulary that is not yet imagined. While multidisciplinarity incorporates perspectives from multiple disciplines, it does so with a goal focused on one disciplinary research area (Nicolescu, 2014). Interdisciplinarity also overflows discipline boundaries by transferring methods from one discipline to another, however, remains focused within the framework of disciplinary research (Nicolescu, 2014). Nicolescu (2014) frames transdisciplinarity as “once between the disciplines, across the different disciplines, and beyond all discipline (p. 187). The perspective of unity which is identified in Harvard University (2004) and raised by Nicolescu (2014) elevates to a theoretical consideration for transdisciplinarity being both unified and diverse. Nicolescu (2014) stresses the danger in not recognizing three aspects of transdisciplinarity: theoretical, phenomenological, and experimental. The authors of this chapter find significance in the descriptions of transdisciplinarity in terms of the possibility for a new synthesis in higher education, technology, learning science, or even creating new fields.

**SO, WHAT IS NEEDED IN THE FUTURE?**

The future of higher educational institutions is in need of innovators, creative thinkers, problem solvers, and people who can communicate and operate across disciplines, those who IDEO’s CEO Tim Brown called “T-shaped” individuals (Hansen, 2010). Brown described the T-Shaped person having two kinds of characteristics; hence, the letter T to describe them. The vertical stroke of the “T” is a depth of skills that allows them to engage in the creative process. That can be from any number of different fields: an industrial designer, an architect, a social scientist, a business leader, or a professor within higher education. The horizontal stroke of the “T” is the disposition for collaboration across disciplines. It is composed of two things. First, empathy. Empathy is important because it allows people to imagine the problem from another perspective – to stand in somebody else’s shoes. Second, they tend to get very enthusiastic about other people’s disciplines, to the point that they may actually start to practice them. T-shaped people have both depth and breadth in their skills. One of the challenges is to identify or train individuals who