Chapter 9

Transdisciplinarity Practice in Higher Education

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ABSTRACT

This chapter communicates a learning configuration based on a literature review of transdisciplinary practices across higher education institutions. The knowledge of transdisciplinary practice will be expanded through the review of scholarly work by those in higher education and industry. The practices should be applied across disciplines. In order to achieve transdisciplinarity in higher education, co-dependent collaboration of curriculum frameworks, learner, and education strategies must exist. Industry leaders, such as Amazon, Google, and Purdue Global, are solving complex problems and making innovative changes that require experience and exposure across knowledge areas including technology, teaming, and problem solving. This means higher education institutions no longer have the convenience to view academics through independent curriculum and faculty lenses. While collaborative approaches have been used in the past, a transdisciplinary approach should now include industry perspective, evolving learner needs, and education strategies.

TRANSDISCIPLINARITY PRACTICE IN HIGHER EDUCATION

The purpose of this chapter is to communicate a learning configuration based on a literature review of transdisciplinary practices across higher education. The knowledge of transdisciplinary practice will be expanded through the review of scholarly work by those in higher education and industry. While many examples focus on the business industry, the practices and literature should be applied across disciplines. For the purpose of this chapter industry relates to any business organization, profit or nonprofit.

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OVERVIEW

It is important to understand the differences between transdisciplinarity and interdisciplinarity prior to review of practical application. The two terms, while similar operate differently with varied outcomes in practice. Examples of these methodologies in practice help to illustrate the differences further.

Transdisciplinarity

Transdisciplinarity is more than bridging gaps and connecting various groups. It is the necessary span across areas, a spill-over of knowledge, concepts and practices in order to create something new that is integrated. This expanded application of transdisciplinary methods meets new business industry needs of adaptability and agility. Transdisciplinarity, as defined by Jimenez-Eliaeson (2017), “requires us to engage and co-depend on each other to identify the challenges . . . and implement solutions . . . working continuously to iteratively improve upon yesterday’s solutions” (p. 39). Co-dependence could be considered a key distinction in this definition as compared to interdisciplinary as it means a new form of collaboration that removes boundaries to produce new solutions. Two examples of transdisciplinary collaboration between higher education and industry address learner employability and labor market needs.

Institutional leaders at Emory University in Georgia have identified a widening disconnect between what the school provides and what employers want, noting a recent Gallup survey in which 96 percent of college and university provosts said students were job market ready, but only 11 percent of business leaders agreed with this finding (Selingo & Van Der Werf, 2017). A college degree, leaders noted, used to serve as an effective indicator that the recipient had solid preparation in the discipline and was workforce ready; however, that understanding no longer exists. In order to remedy this gap, institutional leaders created opportunities for students to be cross trained in writing, thinking and data science, resulting in increased numbers of students embarking on internship opportunities while in school, as well as increased numbers of students graduating with job offers in hand.

At the University of Utah, illustrated collaboration with business industry occurred through the creation of a series of industry-informed certificate programs in data analysis, instructional design, content marketing and management, operations analysis, and digital communications tools for creative professionals. Content areas were selected because research at the university demonstrated these areas to have particular labor market value amid shortages of qualified professionals to fill the job. Each certificate is taught by a professional in the subject matter, and all courses include the option of secondary instructors and guest panelists, designed to give students additional networking opportunities (Selingo & Van Der Werf, 2017).

These examples exhibit co-dependence, expansion of thinking and elimination of boundaries to solve complex problems. This is in contrast to interdisciplinary collaboration, in which contributing partners maintain a degree of independence.

Interdisciplinary

While many authors indicate a similarity between transdisciplinary and interdisciplinatory definitions, the important distinction is that while both involve collaboration between stakeholders, interdisciplinary maintains the distinction between collaborating groups. “It concerns the transfer of methods from one discipline to another . . . its goal still remains within the framework of disciplinary research” (Nicolescu,