Chapter 14
Structuring an Emergent and Transdisciplinary Online Curriculum: A One Health Case

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ABSTRACT

Subject domains are in constant transition as new research and analysis reveal fresh insights, and occasionally, there may be paradigm shifts or new conceptual models. Transdisciplinary approaches may be understood as such a shift, with new approaches for conceptualization, analysis, and problem solving via recombinations of domain fields. Such transitory paradigm-shifting moments remove the usual touchpoints on which a curriculum is structured. There are often few or none of the accepted sequential developmental phases with identified concepts and learning outcomes in book chapters, thematic structures, and historical or chronological ordering. An emergent curriculum requires a different instructional design approach than those that have assumed curricular pre-structures. Based on a year-and-a-half One Health course build, this chapter offers some insights on the processes of defining and developing an emergent curriculum.

INTRODUCTION

Curriculums in most learning domains are in constant evolution, with the integration of new voices and research informing the current field. Sometimes, the shift in domains occurs at a higher level of abstraction, in a way which integrates or assimilates multiple domains. Occasionally, an instructional design and development team has to work together to create an undefined and emergent curriculum for an online course.

This emergent context provides unique design and development challenges. The development cycle may be much longer than typical for the course build, which has to evolve somewhat organically. A range of Subject Matter Expert (SME) talent has to be brought into play to develop the learning contents. The development team (itself cross disciplinary) has to walk a fine line between the objective science-based learning and any perceived advocacy role in promoting the new paradigm. Pedagogical coherence has to be created from potentially disjointed elements, with special considerations for learner needs, given the...
need for individual sense-making from different learning traditions.

By definition, such learning is not fully defined; rather, it is emerging out of a fluid situation. Emergent learning may well be contested and even rejected by practitioners. Further, emergent curriculums have the potential to affect not only undergraduate and graduate students but also researchers, policy-makers, applied practitioners, and administrative leaders in the world. Historically, an “emergent curriculum” was defined in the context of child learning which integrated elements of the environment into a flexible learning approach. Here, the term is used to denote a curriculum not yet fully defined by those in a domain field. As such, an emergent curriculum is evolving and transitory. It may be accepted or rejected by practitioners.

BACKGROUND

In higher education today, it is very hard to find fields that are not influenced by other domains. Very insular fields are rare, and the norm is interdisciplinary learning. It will be important to define some terms early on. Traditionally, a uni-discipline or mono-discipline consists of a domain level evolving in “isolation” without the cross-fertilization of ideas. This domain involves a specific body of knowledge with its own history, a shared identity of a professional community, common terms, contributing researchers, accepted research methods (modes of inquiry), professional values, research and practitioner methods, and contents.

According to Jantsch (1972), a “multidisciplinarity” approach combines juxtaposed learning between disciplines without clear relational ties between them. In this approach, the disciplines retain their unique identities; a multidisciplinary research project is often “the simple sum of its parts” (Wagner, et al., 2011, p. 16). (By contrast, “pluridisciplinary” or “polydisciplinary” refers to the juxtaposition of disciplines seen to be related or somewhat similar, such as clusters of languages or “math” and “physics”). Multidisciplinarity involves the engagement of several disciplines in sequential or juxtaposed modes.

“Cross-disciplinarity” is typified by “rigid polarization toward specific monodisciplinary concept” with a particular domain emerging in the forefront as contrasted with other domains (Wagner, et al., 2011, p. 16). This approach does not dissolve the boundaries of the respective domains by integrates parts of various domains while allowing one or a few to be dominant.

An “interdisciplinarity” or blended approach is described as having a coordination of disciplines (knowledge and methods) by higher-level concepts that define interrelationships between domains. The interactions between the various disciplines may be at a variety of levels, whether at the level of concepts, methods, terminology, research, or other modes. Such an approach enables the formulation of “a holistic view or common understanding of a complex issue, question, or problem” (Wagner, et al., 2011, p. 16) that lead to more accurate-world understandings for comprehension, analysis, trouble-shooting, research, design, policy-making, and intercommunications and cooperation. Practically, interdisciplinarity is “the combination of different perspectives to tackle a common problem” (Sillitoe, 2004, p. 8).

Finally, there is a supra-domain approach: “transdisciplinarity” describes “multilevel coordination of (an) entire education / innovation system” that is integrated and formally structured (Jantsch, 1972, p. 15). Transdisciplinary connections are built from axiomatic understandings of the world that help bring together various domains of study for value-added research. An integrative “transdisciplinary” framework emerges from a worldview that moves beyond the human-created boundaries of a learning domain. This approach enables the creation of new knowledge. It enables reaching across professional and academic groups to practitioners in the field and those in the broader