Chapter 5
Reconceptualizing Universal Design for Learning (UDL) as Learning Technology in Non-Formal Education

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ABSTRACT

Learners can be as diverse as the opportunities through which learning takes place. Educators in non-formal (i.e., museum) settings must embrace the inevitable heterogeneity of learner groups in order to offer meaningful experiences, just as do educators in formal (i.e., classroom) realms. This awareness can and should be the impetus for planning instruction of any kind considering the strengths and areas of focus for learners as unique entities, even if educated in a whole group scenario. This chapter will offer a novel interpretation of learning technology to include models and frameworks of support, such as Universal Design for Learning (UDL). The recognition, strategic, and affective cognitive networks provide a structure for how differentiation can be operationalized and applied so that access to instruction is maximize while barriers are minimized.

INTRODUCTION

The purpose of this chapter is to explore pedagogical approaches, such as Universal Design for Learning (UDL), as applied in non-formal educational (NFE) settings. Chapin (2009) investigated ways that learning technology applications with pedagogical intent were (or were not) used in NFE settings, specifically museums. Recommendations for professional development related to pedagogical practices and approaches in NFE settings were offered from that investigation so as to increase competence and confidence in adeptly addressing learners’ strengths and needs. The present chapter will: reveal the
pedagogical practices of non-formal educators, such as children’s museum educators; demonstrate how the nature of learning technology fits into learner-centered educational approaches; offer a pedagogical paradigm for non-formal educators; and inform the use of learning technology in an intentional (and pedagogical) way. With this information, the authors provide strategies as to how UDL can be incorporated into educators’ repertoire in museums with specific focus on students in general education, minority youth, and students with disabilities (SWD). In addition, this chapter will explore how extant research literature on NFE, UDL, and the construct of learning technologies can be linked to more fully determine how pedagogically intentional practices can enhance NFE.

Definitions

Non-formal education (NFE) was not identified as a type of education until the 1970’s (Fordham, 1993). Distinctions of educational ‘types’ were further made by Coombs, Prosser, and Ahmed (1973), who defined non-formal education as “the truly lifelong process whereby every individual acquires attitudes, values, skills and knowledge from daily experience and the educative influences and resources in his or her environment—from family and neighbors, from work and play, from the marketplace, the library and the mass media” (p. 8). Further, Coombs and Ahmed (1974) defined NFE as “any organized, systematic, educational activity carried on outside the framework of the formal system to provide selected types of learning to particular subgroups in the population, adults as well as children” (p. 8). In their definition of formal education as found in schools and classrooms, Coombs and Ahmed (1974) noted that this type of learning is “the hierarchically structured, chronologically graded educational system, running from primary school through the university and including, in addition to general academic studies, a variety of specialized programs and institutions for full-time technical and professional training” (p. 8). Taylor (2006) indicated that NFE can be complementary to lessons received in more formal settings like schools while enriching one’s cultural perspective or comprehensive understanding. NFE also serves as an alternative to formal education, especially in situations where learners experience overwhelming challenges and mistrust in structured educational settings (Taylor, 2006).

As defined by the international Association for Learning Technology (2015), learning technologies are practices, information, strategies, and systems that improve teaching, learning, and assessment. Considering a strict interpretation of “technology” as the way many conceived it, electronic, digital, assistive, and adaptive technology may be at the forefront of related endeavors. Indeed, technology in its nascent form is an important dimension for addressing teaching, learning, and assessment in a way that is appropriate for all learners by offering adaptations that can easily be incorporated at a whole class level, but in an individualized manner. For example, the most recent publications in the Research in Learning Technology journal (2016), topics such as iPads, MOOCS, computerized simulations, video, audio, and alternatives to textbooks were the focus, with pieces about social media as well as online teaching and learning on mobile devices being among the most frequently accessed. In this chapter, the authors encourage the reader to consider instructional pedagogies and frameworks that provide structure and organization to these methods as another form of learning technology that can work in tandem with more ubiquitous interpretations of technology listed above. Specifically, in this chapter, the authors propose a conceptualization of Universal Design for Learning (UDL) as a learning technology from the perspective of addressing those key areas (e.g., teaching, learning, and assessment) as fitting into the NFE environment.