

Chapter 18

Non-Linear Curriculum Experiences for Student Learning and Work Design: What Is the Maximum Potential of a Chat Bot?

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ABSTRACT

Developing curriculum aligned with employment outcomes often includes linear design. However, students do not cognitively approach their education linearly, and economies do not fluctuate linearly. We should support students' natural non-linear approaches to education and employment. Chat bots that include non-linear presentation of text, short video clips, and images can help us design curricular experiences that mirror and personalize unique student cognition. As students navigate nudges of content within a chat bot on their phone or full-page views in an internet browser, the initial content will catalyze new questions and non-linear thinking for students to then explore their own employment related journeys. This will buttress students to be agents in their learning instead of objects of linear design. Machine learning models feeding chat bot learning journeys and experiences can help improve organic assessment for a constellation of employment preparedness outcomes and connection.

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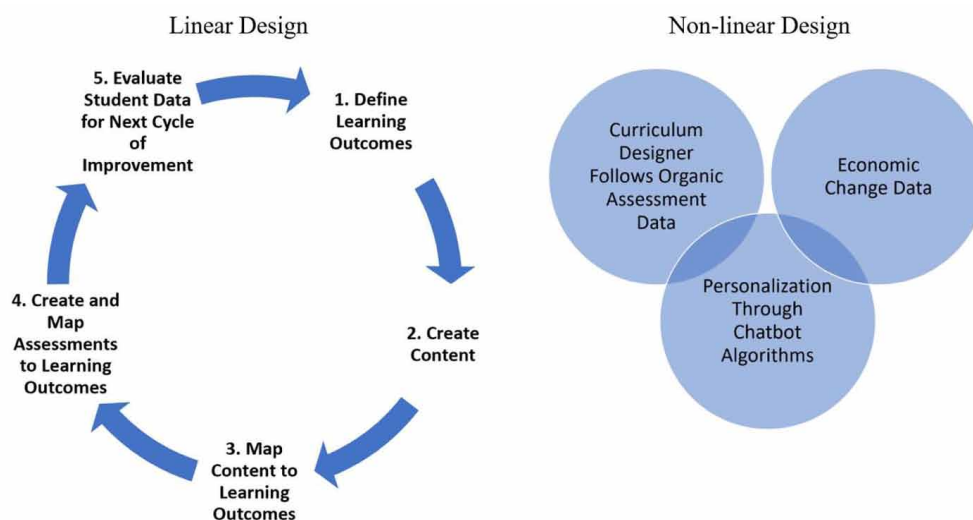
INTRODUCTION

Curriculum design often includes a linear approach that follows a sequential order of development from beginning to end. Major philosophical and psychological assumptions are taken for granted as objectives are set, learning experiences are selected, instruction is organized, and progress is then evaluated in linear ways (Paesani, 2017). This linear approach to developing education for employment/work connections rarely keeps pace with the rate of change in our global economy.

As futurists predict the further unbundling of education credentials and as consumers of traditional higher education question its value in an increasingly changing global economy, it will be intriguing to observe the upcoming decade of work and education design (McCowen, 2017). The global economy continues to escalate in complexity requiring attitudes and skills for jobs yet to be fully defined. Traditional curriculum designers and faculty with common approaches to connecting education for work design will continue to find themselves out of synch with this pace of change (World Economic Forum, 2016).

From both an education-for-work perspective as well as student cognitive approaches to learning, linear curriculum design will continue to be outdated, just as soon as each cycle of relatively slow curriculum development processes are completed. Student cognitive approaches to learning for work design requires innovation in curriculum design for lifelong learning journeys (see Figure 1). As the accelerating density of neurocognitive research enlightens practitioners and developers of education and work designs, we may find students grappling with competencies that become outdated the moment they finish a traditional assessment (Bowers, 2016). This is an ethical dilemma for curriculum designers and faculty to fully understand the positive and negative impacts of giving students the impression that their linearly developed education will prepare them to succeed in future VUCA (volatile, uncertain, complex, ambiguous) and unpredictable employment realities (Hadar, Ergas, Alpert, & Ariav, 2020).

Figure 1. Comparing Linear to Non-linear Design



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