Chapter 4
Some Basics to the Initial Setup and Maintenance of Serialized Online Learning

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ABSTRACT

Optimally, the learning sequence experienced by learners is addressed in the instructional design plan. So too is the sequencing of learning objects in the modules, related modules in the course, related courses in a degree program, and so on, from granular objects to larger ones. A variety of learning contents may be conceptualized, at a zoomed-out level, as "serialized" or a part of a series. Serialized online learning refers to any number of types of large-scale sequenced learning, such as endeavors that continue over extended time (such as a number of years), that involve a number of interrelated learning objects (like podcast series), and that serve both new learners and continuing learners. The instructional design for serialized online learning requires front-loaded design considerations and approaches that consider the continuing nature of such learning.

INTRODUCTION

In applied instructional design, sequences have virtually always been part of the consideration. What are the assumed pre-requisites for the learning? What order should the experienced learning occur in (Simple to complex? Developmental to more advanced?)? What about the sequence of learning activities? (For example, before a field trip or a group simulation, what should the lead-up learning consist of?) What is a reasonable sequence of learning outcomes? In an analytical case study, what information should learners have access to first and then in what sequence thereafter, to highlight different available insights? How should learners transition from one level of knowledge to another? If a process or procedure is taught, what base knowledge should be available to learners, and then how should the sequences be represented

DOI: 10.4018/978-1-6684-7540-9.ch004

for optimal performance? In learning where social interactions are required, what should be the order of interactivity—and to what depth and to what learning ends?

At a zoomed-out level would be large-scale serialized online learning, including projects that continue over years, the creation of a number of interrelated learning objects (in large sets or large series, like podcast series or online encyclopedias), and that serve both new learners and continuing learners. What has not generally been addressed is how to plan, design, and develop such serialized online learning in a way that supports the learners, whether they are new or continuing ones. For example, such serialized online learning may include the following:

- A large set of similar or related learning objects
- A podcast series
- A video series
- An electronic book series
- A public wiki based on a particular topic or domain, and others

This work provides some initial design considerations for large-scale serialized online learning, with some basic assumptions:

- Large-scale serialized learning generally deals with complex learning in particular domains and related fields. The complexity in the learning may be understood cumulatively.
- Large-scale serialized learning will attract a range of learners with evolving needs over time. Some learners will be new ones, and others will be continuing ones.
    - Learners tend to prefer consistency and recognizable patterning.
- The teams that contribute to long-running serialized learning projects will experience turnover and so will need to integrate new contributors (including new leadership) over time. The work standards need to be transferable, and the work practices need to be robust over time.
- The content domain space will evolve and change over time.
- The technological underpinnings for the online learning will evolve over time, so some digital preservation efforts will be important, along with endeavors for future-proofing.
- Large-scale serialized learning may be closed-source or open-source or some combination.

This work explores some of the considerations for building large-scale serialized online learning, with a focus on initial setups of such projects and some maintenance. While most instructional designs are for discrete-sized objects (learning objects, modules, courses, etc.), this challenge involves open-endedness in terms of the series of learning contents and longitudinal time in terms of learning object / learning resource production. The underlying research informing this work stems from decades in the area of online learning design and development.

REVIEW OF THE LITERATURE

At some level, all learning has some intersection with the world, for authentic learning. Some offers focuses on "real-life learning tasks" as the base motive for the learning (van Merriënboer & Stoyanov,