A Tour of the Learning Experience Online (LEO) Classroom:
Demonstrating How eLearning Theory Informs Distance Education Practice

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Distance education has a tradition dating back to the epistles, if not before (Peters 2010). Various teaching theories evolved in the last century inform current online teaching methods. The University of Maryland University College’s course delivery software, Learning Experience Online (LEO), provides an example of current distance education practice. This paper provides a tour of these theories and points out their influence on aspects of LEO.

Figure 1. A Course Home page in LEO.

About LEO

Learning Experience Online (LEO) is an iteration of the D2L (formerly Desire2Learn) course software (University of Maryland University College, 2015b), implemented by the University of Maryland University College (UMUC) in fall of 2014 (University of Maryland
University College, 2015a). The system provides all the mechanisms needed to teach and learn in an asynchronous online environment.

LEO provides functionality to deliver course content, conduct asynchronous discussions, conduct live chats, turn in assignments, take quizzes, access the library, and even store files, associated (or not) with the class. LEO also lacks certain features one might expect of a distance education tool. There is no webinar component that allows real-time video and audio conferencing. There is also no place for students to amalgamate information from all their classes and store them online. Students can access LEO from their computers, devices, or phones, although there is no specific LEO app.

**Classic Distance Education Theory**

Otto Peters (2010) has proposed three stages of distance education: the epistles, correspondence courses, and the modern era. The epistles represent the possibilities that technology like writing and transportation allow for asynchronous instruction and communication. The LEO system is a mechanism for delivering asynchronous text communication. In correspondence courses, learners are able to submit assignments and get instructional feedback. LEO provides many ways for the instructors to interact with students via discussion threads, assignment feedback, and chat functions. In the modern age, various broadcast media deliver instruction to a mass market. LEO’s Internet delivery to personal computers, devices, and phones exemplify this global reach.

Holmberg (2005) had a particularly interesting take on the paradigm shift of the responsibility for education falling on the student rather than the teacher. He points out that this sort of education is the result of student demand. Also, he points out that adult students seem to be the ones who decide when this sort of instruction ends, rather than following the terms of a
larger institution (p. 23). Learners using LEO decide how much of the instruction to follow, which readings to read, which discussion threads warrant their participation, and which assignments they will complete. Most learners are probably motivated by the grade they will receive for the class, but that is a function of the design of the class, not the technology of LEO. Similarly, students have only limited access after the end of a class session to the material on LEO, limiting their choice of when to access the material from the class.

**Twentieth Century Learning Theory**

Ally (2008) says, “The goal of any instructional system is to promote learning” (p. 18). He describes various schools of learning and their implications for designing effective online instructions. The following section details various learning style theories, their online instruction implications, and the way that LEO supports instruction.

**Behaviorist**

The behaviorist school of learning describes the mind as a black box in which one can quantitatively observe responses to stimuli. This has the result of circumventing thought processes (Ally, 2008, p.20). Implications for online learning include:

- The need to explicitly defining outcomes for learners;
- Appropriately sequencing learning materials;
- Testing learners to determine the success of their learning outcomes;
- Providing learners with feedback. (pp. 20-21)

The Content area of LEO provides instructors with the opportunity to organize and present materials to students in an appropriately sequenced way that explicitly defines learning outcomes, as does the ability to add a grading rubric to the Assignments page. The space for Quizzes and Exams and Self Assessments provide a space for testing resources. Discussion
threads, assignment feedback, chat, and the Course Home area all offer a conduit for instructor feedback.

**Cognitive**

Ally (2008) notes that cognitivists “see learning as an internal process that involves memory, thinking, reflection, abstraction, motivation, and metacognition” (p. 21). As such, he insists that online learning strategies should use tactics and present material in ways that assist students in processing the materials efficiently. (p. 22)

Key implications Ally (2008) describes include:

- Organizing information for best possible effect;
- Linking short- and long-term memory in the student;
- Chunking information to help the user avoid information overload;
- Employing strategies that encourage deep-processing on the part of students to enable the transfer of information into long-term memory;
- Accommodation of various learning styles by students;
- Availability of information in different modes;
- Motivating learners;
- Encouraging learners’ metacognitive skills in the learning process;
- Encouraging students to transfer their knowledge into real-life situations. (pp. 23-24)

LEO offers any number of different options for instructors to organize their lesson plans. Certainly the system can deliver information via readings, audio, or video. However, most of these issues rely more on the course design than the delivery mechanism.
Constructivism

In the constructivist view of learning, learners are active participants who do not receive knowledge from the outside, but, rather, interpret and process stimuli received through the senses, and thus create knowledge (Ally, 2003, p.30). Implications that Ally gives for online learning in this system include:

- Making learners active participants;
- Letting learners construct their own knowledge;
- Encouraging collaborative and cooperative learning;
- Giving control of the learning process to the learner;
- Giving learners time to reflect;
- Making learning meaningful;
- Making learning interactive and establishing a social presence for the learner. (pp. 30-31)

LEO forces learners to be active participants. Students must seek out every aspect of the course – in Content, Discussions, Assignments, etc. Learners may take as much time as course deadlines allow to reflect on the material. Areas such as Discussions and Groups allow students to interact and establish social presences.

Connectivism

Ally (2008, p. 34) describes the connectivist theory as a learning theory for the digital age based on the way learners operate and interact in a digital environment. It is a theory that acknowledges that information and knowledge are constantly changing, and that learners have to be able to both un-learn previous information as well as acquire new knowledge. Ally provides these implications for online courses:
Learners need to be able to act autonomously to explore and research information;

- Learners need to unlearn information as it becomes obsolete;
- Learners must be able to evaluate information
- Learners need to recognize the global nature of information and evaluate it accordingly.

(p. 34)

LEO, by nature, is a tool born of the digital era. To use it, students must act autonomously in the learning process. Similarly, LEO provides a link to the UMUC library, and it is easy for a student sitting at a computer to open another browser and do additional online research. The other issues, once again, are for the design of the instruction rather than the delivery mechanism.

**Conclusion**

Twentieth Century teaching theory informs the way most institutions conduct distance education. Whether instructors wish to operate from a cognitive, connectivist, behaviorist, or constructivist approach, the LEO interface provides a platform for instruction, and tools for implementing a teaching approach.
References


