

Theoretical Perspectives Paper

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Comm 4203: Adult Learning Strategies

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Section 1: Learning Experience

The learning outcomes of the experience:

Last term, I took a course at The University of Denver entitled "IDT-4140 Universal Design for Learning," which did an excellent job fulfilling its intended learning outcomes. The following learning outcomes were taken directly from the IDT-4140 Universal Design for Learning (UDL) course syllabus. Describe the principles and theory behind the Universal Design for Learning (UDL) framework; Analyze the impact of UDL on diverse learner populations; Apply UDL to create effective learning activities, assessment tools, and course materials and Implement UDL strategies to address learning design challenges. The following learning goals set expectations for the course participants, explain the 'why' they are taking the course, and serve as motivation to complete the course (Pappas, 2021).

The learning environment and setting; analysis of the learners:

The UDL course I took is a requirement for the Instructional Design and Technology graduate program I am pursuing at The University of Denver (DU). A few students took the course as an elective in the graduate Communications Management program at DU. This ten-week class was delivered online in an asynchronous format and comprised six middle-aged adult students already working in full-time professional careers. We met synchronously for two class meetings. Also, the UDL course contained a small group project of three students that required about ten synchronous meetings using the BigBlueButton in Canvas.

A description of the instructional strategies used:

During the ten-week course, eight weeks were spent learning, analyzing, and applying each principle of the UDL framework, which consisted of the following principles: provide multiple means for Engagement, Representation, Action, and Expression (CAST, 2018). While learning each UDL principle, two processes were employed: "Explore It" and "Do It." During the "Explore It" phase, students would learn numerous details about a specific UDL principle (e.g., Engagement). The next process was themed "Do It," where students "investigated challenges and strategies for implementing the specific UDL principle highlighted during the "Explore It" phase (e.g., Engagement).

This UDL class included numerous readings and materials from various sources, such as two-course textbooks, peer-reviewed journal articles, online articles, and YouTube videos. Moreover, application and reflective assignments linked the UDL principles with practical application, mostly during the "Do It" phase for a particular UDL principle. Next, this UDL course included a "UDL Principles Journal" during the "Do It" phase, where individual students reflected on UDL principles concerning their formal and informal learning throughout life. I found the course extremely motivating as learning and applying UDL principles were interwoven throughout course readings, materials, and assignments. Finally, but most importantly, the professor for the course was actively engaged in UDL implementation with the Colorado Community College system, so her knowledge was extensive and relevant.

The Universal Design for Learning class taught UDL principles by examining accessibility, equity, and inclusion in OER courses. During the "Do It" phase, the entire class analyzed an OER course entitled "[Accessibility Course for Education OER](#)" (ACE course) concerning UDL principles. The analysis of this "Accessibility Course for Education OER" prepared students for their six-week-long group project on a group-selected OER course where we analyzed and proposed improvements in light of UDL principles. Also, since the ACE course was based on UDL principles, I believe all students were motivated, included, and engaged. For instance, analyzing the "Accessibility Course for Education OER" was enlightening as I could directly interact with challenges and strategies for implementing UDL principles with online, virtual learning.

The cooperative group project involved investigating one module in the OER course "[US History to 1875](#)," based on the OER textbook entitled "*The American Yawp: A Massively Collaborative Open U.S. History Textbook, Vol. 1: To 1877*" (<https://www.americanyawp.com/>). As a group, we analyzed, researched, and implemented UDL modifications to the "US History to 1875" OER course. As stated by Wlodowski and Ginsberg (2017), "Cooperative learning creates an environment in which learners can...construct and extend their understanding of what is being learned through explanation and discussion of multiple perspectives...receive interpersonal feedback...receive social support and encouragement to take risks in increasing their competencies..." (158-159). Like the Universal Design for Learning course, I found this cooperative group project learning experience motivating and purposefully designed to foster diversity, equity, and inclusion. Lastly, the "Universal design for learning or UDL is a design

framework that focuses on supporting student success for all students with diverse learning and life needs, not just those with exceptional abilities" (Center for Excellence in Teaching and Learning at OU, 2017).

Section 2:

Learning theory was most evident in the learning experience:

The cognitivist learning theory was most evident in the Universal Design for Learning (UDL) course. The learner setting and environment for the UDL course took place in a fully online asynchronous environment that did not require learners to participate in the course on any specific day or time. Proponents of cognitivist learning theory prefer a personalized learning approach where students can learn at their own pace and engage with varied reading and materials at the cognitive level. Next, readings, materials, assignments, and projects in the UDL course were "organized hierarchically and by the theme" (Merriam and Bierema 2014, 33), divided into sessions, and maintained a logical flow of lessons taught, which is characteristic of cognitive or information processing learning theory (Merriam and Bierema 2014).

Why theory was appropriate for the given experience:

The cognitivist learning theory was appropriate in the Universal Design for Learning (UDL) course based on the learning outcomes, learning environment, and setting. The IDT-4140 Universal Design for Learning course is the only UDL course in the instructional design and technology major, which means a great deal of content must be covered in a relatively brief, ten-week course. Thus, the cognitivist learning theory would be ideal for covering numerous UDL principles and concepts in a survey-type course. Moreover, during the course design process, a facilitator must align the course content to match learning outcomes using an ideal learning theory in a backward design curriculum planning process (Wiggins & McTighe, 2008). Thus, the cognitivist learning theory was ideal for correlating course learning outcomes with abundant course content within a concise class term of ten weeks.

Cognitivist learning theory principles and strategies underlie the course outcomes for The IDT-4140 Universal Design for Learning course: Describe the principles and theory behind the Universal Design for Learning (UDL) framework; Analyze the impact of UDL on diverse learner populations; Apply UDL to create effective learning activities, assessment tools, and course

materials and Implement UDL strategies to address learning design challenges. The verbs and strategies in the learner outcomes demonstrate a "Bloom's taxonomy of cognitive outcomes" (Merriam and Bierema 2014, 34) approach to learning with concepts such as "describe the principles and theory behind...", or "analyze the impact of UDL...", or "apply UDL to create effective learning activities...", and "implement UDL strategies..." (Hardman 2022). The cognitivist learning theory has been verified with the UDL course learning outcomes, learning environment, and setting; however, it is also displayed with instructional strategies implemented throughout the course.

Predominant instructional strategy aligned with underlying theory:

The predominant instructional strategy in the course aligns well with the cognitivist learning theory. For instance, course readings, materials, and activities throughout the course were from robust cognitive sources such as textbooks, journal articles, podcasts, and videos. These learning materials would allow learners to use prior knowledge to process new information. Further, the professor organized readings and instructional materials in advance, demonstrating how knowledge can be transferred to the learner, characteristic of the cognitivist learning theory. Merriam and Bierema (2014) highlight this very feature, "Although information processing theorists put the mind back into the learning equation, they, too, appear to assume that knowledge is 'out there' to be transferred into the learner. The computer metaphor itself suggests that knowledge is input to be processed and stored by learners" (36).

The course consisted of stages in the learning process with Explore IT phases, Do IT phases, and reflection. During the Explore IT phase, new information would be instilled in learners in a sequence to build on what is already understood (prior knowledge). This cognitive instructional strategy of explicit learning occurred as participants intentionally sought knowledge to attempt and learn a process. These explicit learning activities caused learners to be attentive and take action to acquire knowledge (Valamis 2022). Next, in the Do IT phases and reflection sessions, learners read, viewed, and interacted with the reading and materials that involved cognitive strategies such as outlining, summarizing, and synthesizing (Ertmer and Newby 2013). Lastly, there was "an emphasis on structuring, organizing, and sequencing information to facilitate optimal processing" during learning activities to better understand UDL principles, theory, and framework (Ertmer and Newby 2013, 53).

As a student in the class, I explored numerous readings, digging into the concepts of the UDL principles and incorporating this learning in weekly class online discussions. As stated by Ertmer and Newby (2013), "Creation of learning environments that allow and encourage students to make connections with previously learned material" (53) is central to cognitivist learning theory. Biweekly, we synthesized the learning associated with a specific UDL concept by completing an activity in our UDL principles journals. Here, we would focus on the UDL principle by using a personal and professional example to illustrate the UDL principle we were learning for that week. Moreover, weekly class discussions and the UDL principles journal provided me with a space to reflect as a learner at a personal level and a teacher at a professional level. Cognitivist learning theory uses strategies such as learner control and metacognition to emphasize the "...active involvement of the learner in the learning process" (Ertmer and Newby 2013, 53), which can be seen with weekly class discussions and the UDL principles journal.

Section 3:

Secondary learning theory and instructional strategy:

As mentioned previously, the IDT-4140 Universal Design for Learning course is the only UDL course in the instructional design and technology major, which means a great deal of content must be covered in a relatively brief, ten-work course. Thus, the cognitivist learning theory would be ideal for covering numerous UDL principles and concepts in a survey-type course. However, in the directions for section three, the following is stated, "Think about what might change and what the implications would be if another learning theory and instructional strategy underpinned the experience." Therefore, my proposal envisions "what could be" using constructivists' learning theory with a UDL course that is longer in duration or as a separate UDL studio course. Lastly, I will propose and assess the implications of approaching the UDL course using the constructivists' learning theory and instructional strategies.

During the current ten-week UDL course, eight weeks were spent learning, analyzing, and applying each principle of the UDL framework. During the "Explore It" phase, students would learn numerous details about a specific UDL principle (e.g., Engagement). The next process was themed "Do It," where students "investigated challenges and strategies for implementing the specific UDL principle highlighted during the "Explore It" phase" (e.g., Engagement). During the "Do IT" phase, I explored and analyzed OER courses that were already

created. For instance, during the "Do It" phase, the entire class analyzed an OER course entitled "[Accessibility Course for Education](#)" (ACE course) concerning UDL principles. Likewise, the cooperative group project involved investigating one module in the OER course "[US History to 1875](#)." As a group, we analyzed, researched, and implemented UDL modifications to the "US History to 1875" OER course.

As overviewed by Merriam and Bierema (2014), a central element of constructivist learning is that learning involves creating meaning from learning. Moreover, "...aspects of constructivism, especially the social construction of knowledge, are central to self-directed learning, transformational learning, experiential learning, reflective practice, situated cognition, and communities of practice" (Merriam and Bierema 2014, 37). My extended UDL course or UDL studio course would be developed using the constructivist element of situated cognition. Our course textbook states, "Situated cognition posits that learning occurs in a context, that is, our learning is situation-specific, and in fact, the nature of the context structures the learning" (Merriam and Bierema 2014, 37). Additionally, situated cognition provides "...learning is also social and mediated through the use of tools (either physical such as computers, maps, books, or psychological/cultural such as language) (Merriam and Bierema 2014, 37). Therefore, the "Do IT" phase in my UDL studio course would involve students applying UDL theories, principles, and strategies by working in a team learning environment that involved creating Canvas courses or instructional websites.

Implications of secondary learning theory and instructional strategy:

As presented in Merriam and Bierema (2014), "...when we talk about "situated cognition" or as it is also referred to, "contextual learning," we are acknowledging the importance of where this learning occurs, that is, the context itself shapes the learning" and "...situated cognition is more akin to learning in practice in a context" (Merriam and Bierema 2014, 117). Therefore, the second part of my extended UDL course or UDL studio course would take place synchronously in a "studio" or "workshop" setting. In this UDL studio course, learning would become more social and interactive, shifting from individual learners to the learning context.

The UDL course I took had little opportunity for self-directed learning or applying UDL principles using my own volition. The UDL principles journal fostered problem-solving and immediacy throughout the course by allowing me to submit the deliverable component in a way

that best suited my learning. For instance, I could submit my journal assignment in written or video/audio formats. Sometimes, I would create a video for my UDL principle journal assignment; at other times, I would submit a traditional paper. Being able to think critically about my deliverable, problem-solving during this process, and arriving at my solution highlight "...that adults are problem-centered, not subject-centered, and desire immediate, not postponed application of the knowledge learned" (Merriam and Bierema 2014, 53). However, the overall curriculum and assignments for the UDL course were fixed. I would have enjoyed having a few assignments that gave me a chance for my self-directed learning of UDL principles. This concept is highlighted by (Merriam and Bierema (2014), "As a person matures, his or her self-concept moves from that of a dependent personality toward one of a self-directing human being" (47).

Alignment and implications of Constructivist learning theory and instructional strategies:

The Universal Design for Learning involves applying UDL principles and framework during the design process. Thus, I cannot simply cognitively interact with the UDL framework. I need to apply the UDL in a situated cognition setting. Merriam and Bierema (2014) highlight this concept, "Situated cognition posits that all thinking, learning, and knowledge arise from socially mediated activities embedded in authentic and meaningful contexts" (Merriam and Bierema 2014, 117). Therefore, the current UDL course is ideal for using a cognitivist learning theory and for learning about the nature of UDL design. My studio UDL course would involve students working together to develop skills in Universal Design for Learning by producing a team project. The learning outcomes for this team project might be the following:

- Design a website that incorporates UDL principles.
- Apply the UDL framework by developing an OER course.
- Create a Canvas course that incorporates the UDL framework.

Learning in my studio UDL course would further align constructivists' theory and instructional strategies by fostering student interaction and collaboration. There would be ongoing partner and small group work during studio sessions. Perhaps, a few students on the studio team are focused on issues related to UDL accessibility features on the team website. This small UDL accessibility group could discuss and analyze plans they created at the previous studio session. This UDL accessibility group time could be spent asking questions of colleagues regarding the feasibility of

an idea or plan. Moreover, within any group, there are members with greater degrees of expertise. Therefore, Members with certain levels of expertise with UDL accessibility could help scaffold the learning for other learners in the UDL accessibility group so they share and benefit from collective knowledge.

Section 4: Conclusion

The IDT-4140 Universal Design for Learning course is a ten-week course. Eight weeks were spent learning, analyzing, and applying each principle of the UDL framework. This UDL class included numerous readings and materials from various sources. While learning each UDL principle, two processes were employed: "Explore It" and "Do It." Moreover, application and reflective assignments linked the UDL principles with practical application, mostly during the "Do It" phase. The cognitivist learning theory is ideal for covering numerous UDL principles and concepts in a survey-type course.

My proposed theoretical learning would use constructivists' learning theory with a UDL course that is longer in duration or as a separate UDL studio course. My UDL studio course would be developed using the constructivist element of situated cognition. The "Do IT" phase in my UDL studio course would involve students applying UDL theories, principles, and strategies by working in a team learning environment that involved creating Canvas courses or instructional websites. In this UDL studio course, learning would become more social and interactive, shifting from individual learners to the learning context.

The Universal Design for Learning involves applying UDL principles and framework during the design process. Thus, I cannot simply cognitively interact with the UDL framework. I need to apply the UDL in a situated cognition setting. Therefore, the current UDL course is ideal for using a cognitivist learning theory and for learning about the nature of UDL design. My studio UDL course would involve students working together to develop skills in UDL using the constructivist element of situated cognition.

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