EDUC 5303.060
Applied Learning Theories
<u>**Spring 2025, Online**</u>

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Office: BEP 204
Office Hours: Office Hours: Thursday 4:00 – 7:00 pm (& by appointment)
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COURSE DESCRIPTION:
This course will provide the learner with an overview of major contemporary approaches to the study of human learning. The focus of the course will be the linkage between theory and educational practice.

<u>***Last day to Withdraw from the course: March 31st, 2025***</u>

STUDENT LEARNING OUTCOMES:
After completion of this course, students will be able to:

1. Understand the historical development of contemporary views of human learning
2. Understand and analyze behavioral, cognitive, and social cognitive theories of learning.
3. Understand and analyze developmental perspectives on human learning
4. Apply knowledge of learning theory to the analysis of educational practices

Required Student Resources:

Textbook:

Ormrod, J.E. (2020). *Human Learning (8th Ed.).* Pearson.

ISBN: 978-0134893662

      Available from the UTT bookstore or online.

Additional Readings (to be distributed by instructor):

Center for Education Statistics and Evaluation (2017a). Cognitive Load Research Teachers Really
      Need to Understand. Retrieved from https://www.cese.nsw.gov.au/publications-
      filter/cognitive-load-theory-research-that-teachers-really-need-to-understand

Center for Education Statistics and Evaluation (2017b). Cognitive Load Theory in Practice.
      Examples for the Classroom. Retrieved from
      https://www.cese.nsw.gov.au//images/stories/PDF/Cognitive_load_theory_practice_guide_A
      A.pdf

Schunk, D. (2020). *Learning theories: An educational perspective*. Pearson.

Supportive (Optional Readings – but potentially useful for projects/LRA's):

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191 - 215.

Bandura, A. (1989). Human agency in social cognitive theory. *American psychologist*, *44*(9), 1175.

Chinn, C. A., & Brewer, W. F. (1993). The role of anomalous data in knowledge acquisition: A theoretical framework and implications for science instruction. *Review of educational research*, *63*, 1-49.

Dekker, S., Lee, N. C., Howard-Jones, P., & Jolles, J. (2012). Neuromyths in education: Prevalence and predictors of misconceptions among teachers. Frontiers in psychology, 429

Duit, R., Treagust, D., & Widodo, A. (2008). Teaching science for conceptual change: Theory and practice. In *International handbook of research on conceptual change* (pp. 629-646). Routledge.

Dunlosky, J., Rawson, K. A., Marsh, E. J., Nathan, M. J., & Willingham, D. T. (2013). Improving students' learning with effective learning techniques: Promising directions from cognitive and educational psychology. *Psychological Science in the Public Interest*, *14*, 4-58

Grospietsch, F., & Mayer, J. (2019). Pre-service science teachers' neuroscience literacy: Neuromyths and a professional understanding of learning and memory. Frontiers in human neuroscience, 13, 20.

Hulleman, C. S., & Barron, K. E. (2015). Motivation interventions in education: Bridging theory, research, and practice. In Handbook of educational psychology (pp. 174-185). Routledge

Kirsch, I., Lynn, S. J., Vigorito, M., & Miller, R. R. (2004). The role of cognition of classical and operant conditioning. *Journal of Clinical Psychology, 60(4)*, 369-392.

Mayer, R. E. (2009). Constructivism as a theory of learning versus constructivism as a prescription for instruction. In S. Tobias & T. M. Duffy (Eds.). *Constructivist instruction: Success or failure* (pp. 184 – 200). New York: Routledge

Moreno, R., & Mayer, R. E. (2010). Techniques that increase generative processing in multimedia learning: Open questions for cognitive load research. Cognitive load theory, 153-177.

Rescorla, R. A. (1988). Pavlovian conditioning: It's not what you think it is. American Psychologist, 43, 151 – 160.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, *55*(1), 68.

Schunk, D. H., & Zimmerman, B.J. (2003). Self-regulation and learning. In W.M. Reynolds & G.E. Miller (Eds), *Handbook of Psychology (Volume 7: Educational Psychology),* (pp 59-78). Hoboken, NJ: Wiley.

Skinner, B. F. (1965). The technology of teaching. Proceeding of the Royal Society, 162, 427- 443.

Sweller, J. (2011). *Cognitive load theory.* In J. P. Mestre & B. H. Ross (Eds.), *The psychology of learning and motivation: Vol. 55. The psychology of learning and motivation: Cognition in education* (p. 37–76). Elsevier Academic Press. https://doi.org/10.1016/B978-0-12-387691-1.00002-8

Zimmerman, B. J. (2011). Motivational Sources and Outcomes of Self-Regulated Learning and Performance In B. J. Zimmerman & D. H. Schunk (eds.) *Handbook of self-regulation of learning and performance* (pp. 49-64). Routledge.

Course Policies and Expectations:

<u>Use of Artificial Intelligence:</u> Most assignments in this course will permit using artificial intelligence (AI) tools, such as ChatGPT or Copilot. When AI use is permissible, it will be documented in the assignment description, and all use of AI must be appropriately acknowledged and cited. When using AI tools for assignments, add an appendix showing (a) the entire exchange (e.g., prompts used), highlighting the most relevant sections; (b) a description of precisely which AI tools were used, (c) an explanation of how the AI tools were used (e.g. to generate ideas, elements of text, etc.); and (d) an account of why AI tools were used (e.g. to save time, to surmount writer's block, to stimulate thinking, to experiment for fun, etc.). Using AI tools without appropriate acknowledgment and citation violates UT Tyler's Honor Code, constitutes plagiarism, and will be treated as such.

<u>Course Environment:</u> This is an online course that is delivered through the Canvas Learning Management System. As such, it is imperative that you check Canvas for necessary information and course materials. If you experience technical problems or have a technical question about this course, you can obtain assistance by emailing itsupport@patriots.uttyler.edu. When you email IT Support, be sure to include a complete description of your question or problem including: (1) the title and number of the course, (2) the page in question, (3) If you get an error message, a description and message number, and (4) what you were doing at the time you got the error message.

<u>Written Assignments:</u> All written assignments should be typed (double-spaced, Times New Roman, 12-point font) and submitted by midnight Central Standard Time on the due date. All written assignments should be submitted through the assignment link that I will provide. **Please do not put your name or other identifying information in the assignment document. I will be using settings in CANVAS that allow me to grade assignments without knowing the student's identity.** Assignments completed for other courses may **<u>NOT</u>** be turned in for this course and will be considered **<u>academic dishonesty</u>**.

<u>Email:</u> Questions and concerns about course content and assignments should be submitted to my email. I will make every effort to respond quickly to your emails. Generally speaking, I check email twice a day during the workweek and less frequently on the weekend. If my schedule makes me unavailable to answer emails for an extended period, I will try to post an announcement so that you can plan accordingly. My priority is communicating with you and providing you with the tools needed to be successful in the course, so if there are any problems, we will work to solve them.

<u>Late Work Policy:</u> Late work refers to any course assignment that is submitted after the stated deadline. **<u>Late work will be accepted in this class. However, there will be a 10% penalty for</u>**

each late day. Practically, this means that you will not receive credit for an assignment if you submit after 10 or more days. Importantly, the late work policy does not apply to discussion board posts. Discussion board posts and replies will not be accepted after the stated deadline.

Student Assignments & Projects:

The course is designed to be delivered in a "module format." This means that there will be a few different modules that you will work through that include their own readings, assignments, quizzes, and tests. The modules will be presented in a standardized format. The following are standard activities that will be included in the modules:

Readings: This course requires a considerable degree of independent reading to ensure that you develop content mastery. There will be two main reading requirements throughout the semester. Specifically, you will be required to read selections from the course textbook and research articles that I will assign. All research articles will be available on the Canvas site. I will also be posting supplemental readings for many of the topics that we will cover this semester. These readings are optional and are provided for those who would like to explore the course topics in more detail.

Lecture Videos: Each week, I will post short lecture videos to the Canvas site to support the development of content mastery. The topic of each lecture video(s) will be related to key concepts found within the readings for that week. The lecture video(s) for each topic will be available on the Canvas site each Monday morning beginning at 9:00 am Central Standard Time.

Quizzes: There will be several short quizzes in the semester (roughly one per topic). These will be delivered online and will serve to provide a check of your understanding. You will be able to take each quiz twice. The highest score will be kept.

Self-Reflections: Research shows that metacognition (the ability to reflect on study success and make changes) is critical for success in college. As such, I will be asking you to complete several low-stakes reflections designed to increase metacognitive ability. I will provide information about these assignments later in the semester.

Traditional Discussion Board: During the first week of the course, you will complete a traditional discussion board. Specifically, you will introduce yourself and share any questions/concerns you have about the course.

Synchronous Zoom Group Discussions: You will participate in several synchronous group discussions this semester. During these meetings, you will discuss course content and how the information can be applied within the classroom. I will provide prompts to help guide your discussion. During the first week of the course, I will ask everyone to share information about their availability and teaching focus. I will use this information to create discussion groups.

Learning Reflection Assignments: There are also in-depth written assignments (these are called "Learning Reflection Assignments"). These assignments are used to ensure that you can analyze, summarize, and apply the theories in each module. These will be outlined in more detail but are generally short analysis and reflection papers that require the *explanation* **and** *application* of specific theories, personal philosophy statements and defenses for theories of learning and motivation (EX: "what do YOU believe…why? Who agrees with you from the field?").

Research Pool Requirement: Students must fulfill a research pool requirement. The research requirement for these courses can be satisfied in one of two ways. First, students can fulfill the research pool requirement by volunteering to participate in approved research studies offered by the School of Education. Alternatively, students can satisfy the research pool requirement by completing alternative assignments that are equal in time and effort to the research opportunities. Detailed information about the research requirement can be found on the CANVAS page for the course.

Due Date: Unless stated otherwise, all assignments are due before 11:59 pm on Sunday, the week that they appear on the course schedule. Stated another way, each week's assignments are due before Midnight on Sunday.

Grade Item	% of final grade	Total Points
Quizzes	37.5%	10 quizzes x 30 points per quiz = 300 total points
Learning Reflection Assignments	37.5%	3 LRAs X 100 points each = 300 points total
Discussion Board Post & Synchronous Zoom Discussions	18.75%	6 DB/SZDs x 25 points per post = 150 points total
Self-Reflection Assignments	3.125%	2 reflections x 12.5 points per reflection = 25 points total
Research Requirement	3.125%	25 points
Course Total		800 points

Please note: The number, content focus, and point value of all assessments and assignments is an approximation and may change.
Letter Grades: Letter grades will be assigned using the following guidelines:
A: 90.00% of points or above, B: 80.00% -89.999% of points, C: 70.00% - 79.999% of points, D: 60.00% -69.999% of points, F: 59.999% of points or below

Date	Topic(s)	Required Reading(s)	Supplemental Readings (Optional)	Discussion Board/Synchronous Zoom	Assignments
Proposed Semester Schedule					
Week 1					
Jan 13th – Jan 19th	Course Orientation and Introduction to the Study of Learning	Ormrod Chapter 1		Introductions & Syllabus Reconnaissance	Quiz: Perspectives on Learning Zoom Availability
Week 2					
Jan 20th – Jan 26th	Neuroscience of Learning	Ormrod Chapter 2	Decker et al., 2012 Grospietsch & Mayer (2019)	Discussion and Analysis of Neuromyths	Quiz: Neuroscience of Learning
Week 3					
Jan 27th – Feb 2nd	Pavlovian Conditioning	Ormrod Chapter 3	Rescorla, 1988 Kirsch et al. (2004)		Quiz: Pavlovian Conditioning

Proposed Semester Schedule					
Date	**Topic(s)**	**Required Reading(s)**	**Supplemental Readings (Optional)**	**Discussion Board/Synchronous Zoom**	**Assignments**
Week 4					
Feb 3rd – Feb 9th	Operant Conditioning	Ormrod Chapter 4	Driscoll, 2005 (Chapter 2) Skinner, 1965	Operant Conditioning Application	Quiz: Operant Conditioning
Week 5					
Feb 10th – Feb 16th	Social Cognitive Theory	Ormrod: Chapter 5	Bandura, 1977 Bandura, 1989 Schunk & Zimmerman (2003).		Quiz: Social Cognitive Theory
Week 6					
Feb 17th – Feb 23rd	Information processing Theory: Encoding and Storage	Ormrod: Chapter 6			LRA #1

Proposed Semester Schedule

Date	Topic(s)	Required Reading(s)	Supplemental Readings (Optional)	Discussion Board/Synchronous Zoom	Assignments
Week 7					
Feb 24th – March 2nd	Information Processing Theory: Retrieval and Forgetting	Ormrod: Chapter 7	Driscoll: Ch 3		Self-Reflection #1 Quiz: Information Processing
Week 8					
Mar 3rd – Mar 9th	Cognitive Load & Cognitive Theory of Multimedia Learning	CESE, 2017a CESE, 2017b	Sweller, 2011 Moreno, R., & Mayer, R. E. (2010)	Evaluation of Educational Application	Quiz: Cognitive Load
Week 9:					
Mar 10th – Mar 16th	Knowledge and Conceptual Change	Ormrod: Chapter 8	Duit et al., 2008 Chinn and Brewer, 1993 Posner et al., 1981		LRA#2

Proposed Semester Schedule

Date	Topic(s)	Required Reading(s)	Supplemental Readings (Optional)	Discussion Board/Synchronous Zoom	Assignments
Week 10 Spring Break					
Mar 17th – Mar 23rd					
Week 11					
Mar 24th – Mar 30th	Metacognition, Self-Regulated Learning, & Learning Strategies	Ormrod: Chapter 12	Dunlosky et al., 2015 Zimmerman, 2011	Promoting Metacognition	
Week 12					
Mar. 31st – Apr 6th	Transfer, Problem-Solving, and Critical Thinking	Ormrod: Chapter 13	TBD		Quiz: Complex Cognition

Proposed Semester Schedule

Date	Topic(s)	Required Reading(s)	Supplemental Readings (Optional)	Discussion Board/Synchronous Zoom	Assignments
Week 13					
Apr 7th – Apr 13th	Constructivism	Schunk: Chapter 8	Ormrod: Chapter 9 Ormrod: Chapter 10 Mayer, 2009		Quiz: Constructivism
Week 14:					
Apr 14th – Apr 20th	Introduction to Motivation	Ormrod: Chapter 15	Hulleman & Barron, 2016 Ryan & Deci, 2000		
Week 15					
Apr 21st – April 27th	Cognitive Factors in Motivation	Ormrod: Chapter 16		Motivational Intervention	Research Requirement Quiz: Motivation

Proposed Semester Schedule

Date	Topic(s)	Required Reading(s)	Supplemental Readings (Optional)	Discussion Board/Synchronous Zoom	Assignments
Week 16: Finals Week					
Apr 28th – May 3rd					Self-Reflection #2 LRA #3 Both assignments due May 1st

Note: All dates subject to change.

Assessment and Standards Matrix

Learning Outcomes	Assessment (including performance-based)	Standards
Understand, compare, critique, and apply key theories of learning and development	Quizzes Exams Discussions Learning Reflection Assignments	**TES**: 1Ai-iii; 1Bi-ii; 1Cii-iii; 1Di; 1Fi-iii; 2Bi-iii; 2Ci-ii; 3Ai-iii; 3Bi- iii; 3Ci; 4Ai-ii; 4Bi-ii; 4Cii-iv; 4Dii-iv; 5Ai-ii; 5Bi-iii; 5Ci-ii; 6Ai-iii;6Bi-ii; 6Dii-iii **ISTE:** 1b, 1c **INTASC:** 1, 2, 3, 4, 5, 8, 9, 10 **PPR:** EC-12 I, II, III
Understand, synthesize, and apply key constructs in cognition and motivation	Quizzes Exams Discussions Learning Reflection Assignments	**TES**: 1Ai-iii; 1Bi-ii; 1Cii-iii; 1Di; 1Fi-iii; 2Bi-iii; 2Ci-ii; 3Ai-iii; 3Bi- iii; 3Ci; 4Ai-iii; 4Ci-iii; 4Dii-iv; 5Ai-ii; 5Bi-iii; 5Ci-ii; 6Ai-iii;6Bi-ii; 6Dii **ISTE:** 1b, 1c, 2c, 3b **INTASC:** 1, 2, 4, 7, 8 **PPR:** EC-12 I, II, III
Identify, understand, and use individual difference and contextual factors to promote student learning.	Quizzes Exams Discussions Learning Reflection Assignments	**TES**: 2Bi-iii; 2Ci-ii; 3Ai-iii; 3Bi- iii; 3Ci; 4Ai-ii; 4Bi-ii; 4Cii-iv; 4Dii-iv; 5Ai-ii; 5Bi-iii; 5Ci-ii; 5Di-ii; 6Ai-iii;6Bi-ii; 6Dii-iii **ISTE:** 1a, 1b, 1c, 1d, 2a, 2b, 3b **INTASC:** 3, 4, 5, 6, 7 **PPR:** EC-12 III, IV
Analyze and develop classroom scenarios that apply components of key theories of learning and development. to promote student learning.	Quizzes Exams Discussions Learning Reflection Assignments	**TES**: 1Ai-iii; 1Bi-ii; 1Cii-iii; 1Di; 1Fi-iii; 2Bi-iii; 2Ci-ii; 3Ai-iii; 3Bi- iii; 3Ci; 4Ai-ii; 4Bi-ii; 4Cii-iv; 4Dii-iv; 5Ai-ii; 5Bi-iii; 5Ci-ii; 6Ai-iii;6Bi-ii; 6Dii-iii **ISTE:** 1b, 1c **INTASC:** 1, 2, 3, 4, 5, 8, 9, 10 **PPR:** EC-12 I, II, III