

EDUC 5303
Applied Learning Theories
Spring 2022, Online

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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. The last day to withdrawal from this course is March 28, 2022.

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):

Akpan, B. (2020). Classical and Operant Conditioning—Ivan Pavlov; Burrhus Skinner.
In *Science Education in Theory and Practice* (pp. 71-84). Springer

Anderson, R. C. (2018). Role of the reader's schema in comprehension, learning, and memory. In
Theoretical Models and Processes of Literacy (pp. 136-145). Routledge.

Baddeley, A., Eysenck, M. W., & Anderson, M. C. (2020). *Memory* (3rd ed.). Routledge.

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_AA.pdf
- 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.
- 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
- 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
- Mayer, R. E., & Moreno, R. (2003). 9 ways to reduce cognitive load in multimedia learning. *Educational Psychologist*, 38, 43 – 52.
- Salomon, G., & Perkins, D. N. (1998). Individual and social aspects of learning. In P. D. Pearson & A. Iran-Nejad (Eds.), *Review of Research in Education* (Vol. 23, pp. 1-24)
- 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>
- Van Merriënboer, J. J., & Sweller, J. (2005). Cognitive load theory and complex learning: Recent developments and future directions. *Educational psychology review*, 17, 147-177.
- 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.
- Zins, J. E., & Elias, M. J. (2007). Social and emotional learning: Promoting the development of all students. *Journal of Educational and Psychological consultation*, 17(2-3), 233-255

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

- Ames, C. (1990). Motivation: What teachers need to know. *Teachers college record*, 91(3), 409-421.

- 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.
- Bjork, R. A., Dunlosky, J., & Kornell, N. (2013). Self-regulated learning: Beliefs, techniques, and illusions. *Annual review of psychology*, 64, 417-444
- 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
- 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.
- Nairne, J. S., & Neath, I. (2013). Sensory and working memory. In A. F. Healy & R. W. Proctor (Eds.), *Comprehensive handbook of psychology, second edition, Vol. 4: Experimental Psychology* (pp. 419-445). New York: Wiley.
- Neath, I., & Surprenant, A. M. (2005). Mechanisms of memory. In K. L. Lamberts, & R. L. Goldstone (Eds.), *Handbook of cognition* (pp.221-238). London: Sage Publications.
- 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.
- Moreno, R., & Park, B. (2010). Cognitive load theory: Historical development and relations to other theories. In J.L. Plass, R. Moreno, & R. Brunken (Eds.), *Cognitive load theory* (pp. 9-28). Cambridge: Cambridge University Press.
- 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.
- Skinner, B. F. (1965). The technology of teaching. *Proceeding of the Royal Society*, 162, 427-443.

Course Policies and Expectations:

Course Environment: 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.utt Tyler.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.

Written Assignments: 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 name written assignments using the following convention: last name, first initial, assignment title (ex. Last_F_Assignmenttitle). Assignments completed for other courses may **NOT** be turned in for this course and will be considered **academic dishonesty**.

Email: 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.

Late Work Policy: Late work refers to any course assignment that is submitted after the stated deadline. **Late work will be accepted in this class. However, there will be a 10% penalty for 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. The quizzes will also provide you with an idea of the types of questions you may see in the tests).

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.

Buddy System. Each of you has been assigned to a “buddy group” for the duration of the course. This means that you now have a small group of peers to reach out to if you are uncertain about something, you need some help, you are struggling, or you need some words of encouragement. Your job is to help each other succeed in this course. You will receive points for creating a plan to support one another and will be graded on how “well” you support the success of your peers.

Discussion Boards: You will participate in 9 discussion forums across the semester. The topic for each discussion forum will be related to the content of the reading and lecture for that week so finishing the reading and watching course lectures early in the week is advisable. The forum postings will be assessed primarily by looking to see that you have contributed your thinking to the topic of the week and can make meaningful connections among topics covered in the course.

Tests: There are three multiple choice tests in this course. The tests will require a full understanding of the theories and applications of those theories, the ability to synthesize the theories presented in the course readings, and the ability to apply the content to examples.

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 pool requirement must be completed before the final week of the academic semester. 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	20%	10 quizzes x 20 points per quiz = 200 total points
Tests	15%	3 tests x 50 points per test = 150 total points
Learning Reflection Assignments	30%	3 LRAs X 100 points each = 300 points total
Discussion Board Posts	20%	9 DBs x 25 points per post = 225 points total
Buddy System	5%	10 points for support plan 40 points for quality of support across semester
Self-Reflection Assignments	5%	25 points per reflection
Research Requirement	5%	50 points
Course Total		1000 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% of points or above, B: 80% -89 % of points, C: 70% - 79% of points, D: 60.00% - 69% of points, F: 59% of points or below

Proposed Semester Schedule

Date	Topic(s)	Required Reading(s)	Supplemental Readings (Optional)	Discussion Board Posts	Quizzes	Other Assignments
Week 1						
Jan 10 th – Jan 16 th	Course Orientation and Introduction to the Study of Learning	Ormrod Chapter 1		Introductions & Syllabus Reconnaissance	Perspectives on Learning	Buddy System Support Plan
Week 2						
Jan 17 th – Jan 23 rd	Pavlovian Conditioning	Ormrod Chapter 3 (Basic Assumptions & Classical Conditioning)	Rescorla, 1988 Kirsch et al. (2004).		Pavlovian Conditioning	
Week 3						
Jan 24 th – Jan 30 th	Operant Conditioning	Ormrod: Chapter 3 (remaining sections) Ormrod: Chapter 4 Akpan, 2020 (Operant Conditioning)	Skinner, 1968 Driscoll, 2005 (Chapter 2)	Operant Conditioning Application	Operant Conditioning	

Date	Topic(s)	Required Reading(s)	Supplemental Readings (Optional)	Discussion Board Posts	Quizzes	Other Assignments
Week 4						
Jan 31 st – Feb 6 th	Social Cognitive Theory	Ormrod: Chapter 5	Bandura, 1977 Bandura, 1989	Self-Efficacy Case Study	Social Cognitive Theory	
Week 5						
Feb 7 th – Feb 13 th	Self-Regulation & Social Emotional Learning	Zimmerman, 2011 Zins & Elias, 2007	Bjork et al., 2013	School level SEL analysis and discussion	Self & Emotional Regulation	
Week 6						
Feb 14 th – Feb 20 th						LRA #1 Test #1
Week 7						
Feb 21 st – Feb 27 th	Information processing Theory: Encoding and Storage	Ormrod: Chapter 6 Baddeley et al., 2020	Baddeley, 2012 Neath & Surprenant, 2005 Nairne & Neath, 2013			Self-Reflection #1

Date	Topic(s)	Required Reading(s)	Supplemental Readings (Optional)	Discussion Board Posts	Quizzes	Other Assignments
Week 8						
Feb 28 th – Mar 6 th	Information Processing Theory: Retrieval and Forgetting	Ormrod: Chapter 7 Anderson et al., 2018	Ormrod: Chapter 8 Miller, 2010 Baddeley, 2012 Neath & Surprenant, 2005 Nairne & Neath, 2013	Information Processing Application	Information Processing	
Week 9: Spring Break!						
Mar 7 th – March 13 th						
Week 10						
Mar 14 th – Mar 20 th	Cognitive Load	Sweller, 2011 CESE, 2017a CESE 2018b	Moreno & Park, 2010			
Week 11						
Mar 21 st – Mar 27 th	Multimedia Learning	Mayer & Moreno, 2003 Mayer, 2008	Moreno, R., & Mayer, R. E. (2010).	Evaluation of Educational Application	Cognitive Load	

Date	Topic(s)	Required Reading(s)	Supplemental Readings (Optional)	Discussion Board Posts	Quizzes	Other Assignments
Week 12						
Mar 28 th – Apr 3 rd						LRA #2 Test #2
Week 13						
Apr 4 th – Apr 10 th	Constructivism & Conceptual Change	Ormrod Chapter 9 Mayer, 2009 Duit et al., 2008	Ormrod Ch. 10 Chinn and Brewer, 1993 Posner et al., 1981	Application of Conceptual Change	Constructivism	
Week 14						
Apr 11 th – Apr. 17 th	Metacognition & Learning Strategies	Ormrod Ch 12 Dunlosky et al., 2013 Zimmerman, 2011		Promoting Metacognition	Metacognition	
Week 15						
Apr. 18 th – Apr. 24 th	Motivation	Ormrod: Chapter 15 Ormrod: Chapter 16 Hulleman & Barron, 2016	Ryan & Deci, 2000 Ames, 1990	Motivational Intervention	Motivation	Research Requirement Due

Date	Topic(s)	Required Reading(s)	Supplemental Readings (Optional)	Discussion Board Posts	Quizzes	Other Assignments
Finals Week!						
Apr. 25 th – Apr. 30 th						Buddy System Peer Review Self-Reflection #2 LRA #3 Test #3 (All Assignments Due April 28 th)

Note: All dates and content are 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 Community Engagement Project	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 Community Engagement Project	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 Community Engagement Project	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 Community Engagement Project Quizzes	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