

San José State University
Teacher Education
Psychological Foundations of Education (EDTE 224)
Fall 2026

Course and Contact Information

Instructor:	Brent Duckor, PhD
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Office Hours:	By appointment
Class Days/Time:	Thursday 4:30-7:00 pm
Classroom:	238 Sweeney Hall
Course Format:	Hybrid rotation across the 15-week semester: Week 1 in person; Week 2 synchronous online via Zoom; Week 3 asynchronous. This three-week format repeats throughout the semester.

Course Description

Application of constructivist, socio-cultural, behaviorist, and cognitive theories of adolescent psychology as each relates to teaching and learning in secondary school settings.

Core Course Questions and Unit Themes

Across the semester, EDTE 224 returns to three overarching questions: What/who is a learner? How does the learner learn? Why did learning theory evolve to address learning and development in K-12 settings?

Unit 1 — Constructivist and Sociocultural Theories of Learning

- What is a novice? How does the novice learn and teach themselves?
- What is an expert? How does the expert learn and teach themselves?
- What does development mean for the learner?
- Is there a continuum, progression, or stages of growth?
- How does one progress in the act of learning? What is required?
- Why distinguish between learning and development? How would we know?
- What are examples of constructivist and sociocultural approaches to learning today?

Unit 2 — Behaviorist Theories of Learning

- What does it mean to learn through conditioning
- Who are learners—animal, human, or machine—who can be shaped?
- How can a learner be trained through conditioning?
- How do systems of stimulus and response, reward and punishment, praise and blame shape behavior?

- Why is repetition important?
- What are examples of behaviorist approaches to learning today?

Unit 3 — Cognitivist Theories of Learning

- What does it mean to process information?
- What are the capacities and limitations of working memory?
- How does information become encoded into and retrieved from long-term memory?
- What produces cognitive overload?
- What roles do rehearsal, organization, retrieval, practice, and prior knowledge play in learning?
- What makes learning durable and transferable?

Unit 4 — Future Directions of Learning in AI-Mediated Spaces

- What/who is a learner in the 21st century?
- Is there a difference between a human and machine learner?
- How does a machine learner learn similarly to or differently from a human learner?
- What is interpassive learning? What is interactive learning?
- What is the difference, if any, between interpassive and interactive learning for productive struggle?
- Can interpassive learning support the learner's development and growth? If so, How?
- What evidence do we have to have that learners are learning and growing and making progress?

Habits of Mind

EDTE 224 asks you not only to learn about theories of learning, but also to develop habits of mind that support thoughtful teaching and continued professional learning. Throughout the course, we will practice approaching educational questions with curiosity, openness, persistence, reflection, epistemic vigilance and intellectual humility. This includes asking questions before settling on answers, examining assumptions including our own, considering multiple theoretical perspectives in their historical contexts, using evidence drawn from multiple sources to support claims, revising and re-think our initial ideas when warranted, and remaining willing to learn from classmates, students, research, and experience.

These habits are especially important as we examine competing theories of learning and emerging technologies such as artificial intelligence. Rather than treating any theory, instructional practice, or technology as inherently good or bad, we will ask what it helps us see, what it may obscure, under what conditions it supports learning and development, and how we would know. Developing these habits of inquiry and professional judgment is an important part of learning to make principled decisions in complex K–12 classrooms.

Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:

1. Understand and explain the basic theories of learning and cognition. (TPE1)
2. Identify the psychological principles of education that lay behind commonly used models and strategies of teaching. (TPE1)
3. Apply psychological principles to classroom materials, textbooks, other textual resources and other professional resources (e.g., textbooks, curriculum guides, technologies and Internet resources). (TPE1, TPE4, TPE7)

4. Analyze case studies and student work from the perspective of psychological theories of learning, cognition and academic language and literacy, and discuss this work with colleagues. (TPE5, TPE7)
5. Develop assessments that help make teachers instructional decisions to support students. (TPE5)
6. Critique lessons for their implementation of the principles of educational psychology. (TPE4)
7. Develop lessons that implement the principles of educational psychology. (TPE4)
8. Use psychological principles as a means to develop more equitable learning activities for students from diverse backgrounds, including English language learners, and traditionally underrepresented groups. (TPE1, TPE2, TPE3, TPE7)
9. Develop foundational knowledge and skills in the practical and ethical use of artificial intelligence and other digital technologies in planning, assessment and instruction. (TPE3, TPE4, TPE7)

Texts/Readings

Course readings will be available through Canvas and/or the SJSU Library. Specific required readings and selected excerpts will be identified in the course schedule and will be available in weekly CANVAS modules.

Students will also have access to the Harvard Education Press companion glossary for [AI and Deeper Learning: Promises, Paradoxes, and Evolving Practices](#) as a reference resource for key concepts and terminology used throughout the course.

Course Requirements and Assignments

Detailed directions and rubrics will be available on Canvas (“Assignments”).

Assignment/Exhibition #1 — Constructivism and Sociocultural Theories of Learning

Purpose: Analyze a lesson that embodies important principles and practices of the constructivist and sociocultural tradition. Use any appropriate medium to communicate a 3-5 minute explanation of the lesson, the theory of learning it represents, and its strengths and limitations based on the principles of constructivist and/or sociocultural research on adolescent learning and development.

Assignment/Exhibition #2 — Behaviorist Theories of Learning

Purpose: Analyze a lesson that intentionally embodies important principles and practices of the behaviorist tradition. Use any appropriate medium to communicate a 3-5 minute explanation of the lesson, the theory of learning it represents, and its strengths and limitations based on the principles of behaviorist research on adolescent learning and development.

Assignment/Exhibition #3 — Cognitivist Theories of Learning

Purpose: Analyze a lesson that embodies important principles and practices of the cognitivist tradition. Use any appropriate medium to communicate a 3-5 minute explanation of the lesson, the theory of learning it represents, and its strengths and limitations based on the principles of cognitivist research on adolescent learning and development.

Culminating Assignment/Exhibition #4 — Create a Lesson Based on Mix of Learning Theories that Addresses Opportunities and Challenges of AI-Mediated Learning

Purpose: Revisit the essential question, “How do learners learn in this lesson?” Design the lesson to address each of the three major learning theories. Address how AI-mediated learning and development issues may require policies and practices that better ensure productive struggle during the lesson. Also,

consider *who or what is doing the cognitive work*, the distinction between *interactive and interpassive* learning, and what should count as *evidence of student learning and development* in your lesson.

Ethical Use of Artificial Intelligence Tools in EDTE 224

Artificial intelligence will be used in EDTE 224 as a tool for supporting learning, inquiry, lesson design, assessment, and professional reflection. Guided by Duckor and Holmberg’s (2025) Five Pillars of Ethical AI Use for Teaching and Learning—*Accuracy, Agency, Accessibility, Assessment, and Authenticity*—students will examine with reflective exercises whether and how AI strengthens their professional learning rather than substitutes for the intellectual work, productive struggle, and professional judgment required of teachers today.

Students are encouraged to use generative AI when appropriate for course activities and assignments, but such use should be *purposeful, transparent, and open to critical reflection*. Students should be prepared to explain how AI was used, evaluate the accuracy and limitations of its contributions, and distinguish their own thinking, authorship, and professional judgment from work delegated to an AI system. These expectations are intended to help students develop the *human judgment* necessary to make responsible and ethical decisions about AI use in their own K–12 classrooms.

Class Participation

Students are expected to participate actively and professionally across all three course modalities: in-person meetings, synchronous Zoom sessions, and asynchronous learning weeks. Participation expectations and evaluation criteria will be specified in the final syllabus and Canvas.

Grading Information

Assignment weights are under development. The final syllabus will specify the weighting of the three lesson design exhibitions, a culminating reflection, class participation, and any credit/no-credit requirements.

Course Requirement	Weight
Exhibition 1 — Analyze and Evaluate a Constructivist/Sociocultural Oriented Lesson	20%
Exhibition 2 — Analyze and Evaluate a Behaviorist-Oriented Lesson	20%
Exhibition 3 — Analyze and Evaluate a Cognitivist-Oriented Lesson	20%
Exhibition 4 — Create and Design a Lesson from Multiple Perspectives	30%
Class Participation	10%
Self-reflections on Ethical Use of AI	CR/NC

Determination of Grades

Your final grade in the course will be a weighted average of the numeric grades for each of the FIVE course requirements. Late work will only be accepted with prior permission from the professor. A letter grade will be assigned to your average based on the following cut-offs:

A+	100
A	93.0 – 99.9
A-	90.0 – 92.9
B+	87.0 – 89.9
B	84.0 – 86.9
B-	81.0 – 83.9
C+	78.0 – 80.9
C	75.0 – 77.9
C-	72.0 – 74.9
D+	68.0 – 71.9

This course must be **passed with a B- or better** as a credential program requirement.

Note that all students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades.” See [University Policy F13-1](http://www.sjsu.edu/senate/docs/F13-1.pdf) at <http://www.sjsu.edu/senate/docs/F13-1.pdf> for more details.

Per university policy, success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.

Classroom Protocols

Expectations. Students are expected to participate actively and professionally across all three course modalities: in-person meetings, synchronous Zoom sessions, and asynchronous learning weeks. The modalities serve different purposes in the course: in-person meetings emphasize encounter, observation, and experience; Zoom sessions emphasize collaborative analysis, interpretation, and comparison of perspectives; asynchronous weeks emphasize investigation, synthesis, position taking, reflection, and creation of course assignments/exhibitions.

Absences. Because EDTE 224 alternates among in-person, synchronous Zoom, and asynchronous learning experiences, consistent participation across all three formats is important. Up to two excused absences from scheduled in-person or Zoom class meetings are permitted during the semester without additional work or required office hours. While absences do not directly affect your grade, more than two absences will require a conversation with the instructor because missed class meetings can significantly affect your participation in collaborative activities, discussions, and course assignments. Please contact the instructor by email before class whenever possible if you anticipate being absent.

Readings. Course readings provide the theoretical foundation and common language for our study of learning and development. Students are expected to complete assigned readings in preparation for in-person and Zoom discussions as well as asynchronous activities. Because major concepts and theoretical perspectives will recur across the semester, students should expect to return to earlier readings and use them as resources for analyzing learning, designing lessons, completing exhibitions, and examining AI-mediated learning environments.

Course Schedule & Assignments

Week/Date	Modality	Unit / Topic	Guiding Question	Reading	Assignment Due
Week 0 Thurs., Aug 20	In Person/ On Campus	Introduction to Learning and the Learner	Who and what is a learner?	Canvas	“Who are you as a learner?” reflection
Week 1 Thurs., Aug 27	In Person/ On Campus	Constructivism and Socio-Cultural Learning Theory	What is prior knowledge?	Canvas	Quick write/ Discussion Post
Week 2 Thurs., Sept. 3	On Zoom	Constructivism and Socio-Cultural Learning Theory	What are schema and how do they form?	Canvas	Group work
Week 3 Thurs., Sept. 10	Asynchronous (No class)	Constructivism and Socio-Cultural Learning Theory	What is ZPD and how does scaffolding support growth?	Canvas	Analyzing and Evaluating a Constructivist/Sociocultural Oriented Lesson
Week 4 Thurs., Sept. 17	In Person/ On Campus	Behaviorist Learning Theory	What is conditioning?	Canvas	Quick write/ Discussion Post
Week 5 Thurs., Sept. 24	On Zoom	Behaviorist Learning Theory	How does reinforcement operate to reward learners?	Canvas	Group work
Week 6 Thurs., Oct, 1	Asynchronous (No class)	Behaviorist Learning Theory	What is the role of explicit routines and direct instruction?	Canvas	Analyzing and Evaluating a Behaviorist-Oriented Lesson

Week/Date	Modality	Unit / Topic	Guiding Question	Reading	Assignment Due
Week 7 Thurs., Oct, 8	In Person/ On Campus	Cognitive Learning Theory	What is attention and how does it relate to memory?	Canvas	Quick write/ Discussion Post
Week 8 Thurs., Oct, 15	On Zoom	Cognitive Learning Theory	What is the role of cognitive processing and load?	Canvas	Group work
Week 9 Thurs., Oct, 22	Asynchronous (No class)	Cognitive Learning Theory	What are knowledge types?	Canvas	Analyzing and Evaluating a Cognitivist-Oriented Lesson
Week 10 Thurs., Oct, 29	In Person/ On Campus	AI-mediated Learning Theory	What is productive struggle and why does it matter?	Canvas	Quick write/ Discussion Post
Week 11 Thurs., Nov, 5	On Zoom	AI-mediated Learning Theory	How do interactive and interpassive modes of learning differ?	Canvas	Group work
Week 12 Thurs., Nov, 12	Asynchronous (No class)	AI-mediated Learning Theory	What is the difference between analog, digital, and generative AI assisted learning modalities?	Canvas	Designing and Creating a Lesson from Multiple Perspectives
Week 13 Thurs., Nov, 19	In Person/ On Campus	Integrating Multiple Perspectives on Learning and the Learner in the 21 st century	How does authenticity, voice, and accessibility shape learning experience?	Canvas	Group “Lightening” Presentations
Week 14 Thurs., Nov, 26	Holiday	Holiday	Holiday	Holiday	Holiday

Week/Date	Modality	Unit / Topic	Guiding Question	Reading	Assignment Due
Week 15 Thurs., Dec, 3	On Zoom	Feedback Sessions	Feedback Sessions	None	Feedback Sessions
Week 16 Thurs., Dec, 10	On Zoom	Feedback Sessions	Feedback Sessions	None	Feedback Sessions

University Policies and Resources

Per [University Policy S16-9](http://www.sjsu.edu/senate/docs/S16-9.pdf) (<http://www.sjsu.edu/senate/docs/S16-9.pdf>), relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g. learning assistance, counseling, and other resources) are listed on [Syllabus Information web page](https://www.sjsu.edu/curriculum/courses/syllabus-info.php) (<https://www.sjsu.edu/curriculum/courses/syllabus-info.php>). Make sure to visit this page to review and be aware of these university policies and resources.

Library Liaison

Mantra Roy Email: mantra.roy@sjsu.edu

Texts/Readings (Suggested)

Specific required readings and selected excerpts will be identified in the final course schedule. These recommended texts/readings are suggested for research. The Harvard Education Press companion glossary for *AI and Deeper Learning: Promises, Paradoxes, and Evolving Practices* as serves as a reference resource for key concepts and terminology in this field.

Unit 1. Constructivism and Sociocultural Theories: *The Learner as Meaning Maker*

Bada, S. O., & Olusegun, S. (2015). Constructivism learning theory: A paradigm for teaching and learning. *Journal of Research & Method in Education*, 5(6), 66–70.

Brown, A. L., & Campione, J. C. (1994). Guided discovery in a community of learners. In K. McGilly (Ed.), *Classroom lessons: Integrating cognitive theory and classroom practice* (pp. 229–270). MIT Press.

Brown, A. L., Metz, K. E., & Campione, J. C. (1996). Social interaction and individual understanding in a community of learners: The influence of Piaget and Vygotsky. In A. Tryphon & J. Vonèche (Eds.), *Piaget–Vygotsky: The social genesis of thought* (pp. 145–170). Psychology Press.

Dennen, V. P. (2004). Cognitive apprenticeship in educational practice: Research on scaffolding, modeling, mentoring, and coaching as instructional strategies. *Handbook of Research on Educational Communications and Technology*, 2, 813–828.

Dewey, J. (1938). *Experience and education*. Macmillan.

Flavell, J. H. (1963). *The developmental psychology of Jean Piaget*. D. Van Nostrand Company.

Flavell, J. H. (1996). Piaget's legacy. *Psychological Science*, 7(4), 200–203.

- Phillips, D. C. (1995). The good, the bad, and the ugly: The many faces of constructivism. *Educational Researcher*, 24(7), 5–12.
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. Oxford University Press.
- Scholnick, E. K. (Ed.). (1999). *Conceptual development: Piaget's legacy*. Lawrence Erlbaum Associates.
- Scott, S., & Palincsar, A. S. (n.d.). *Sociocultural theory*. The Gale Group.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Yilmaz, K. (2008). Constructivism: Its theoretical underpinnings, variations, and implications for classroom instruction. *Educational Horizons*, 86(3), 161–172.

Unit 2. Behaviorism: The Learner as a Subject Whose Behavior Can Be Shaped

- Pavlov, I. P. (1960). *Conditioned reflex: An investigation of the physiological activity of the cerebral cortex*. Dover Publications.
- Skinner, B. F. (1953). *Science and human behavior*. Macmillan.
- Skinner, B. F. (1963). Reflections on a decade of teaching machines. *Teachers College Record*, 65(2), 168–177.
- Watson, J. B. (1913). Psychology as the behaviorist views it. *Psychological Review*, 20(2), 158–177.
- What Works Clearinghouse. (2024). *Teacher-delivered behavioral interventions in grades K–5*. Institute of Education Sciences, U.S. Department of Education.

Unit 3. Cognitivism: The Learner as an Information Processor

- Artino, A.R., Jr. (2008). *Cognitive load theory and the role of learner experience: An abbreviated review for educational practitioners*. *AACE Journal*, 16(4), 425–439.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (2000). *How people learn: Brain, mind, experience, and school* (Expanded ed.). National Academy Press.
- Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, 63(2), 81–97.
- Schnotz, W., & Kürschner, C. (2007). A reconsideration of cognitive load theory. *Educational Psychology Review*, 19, 469–508.
- Simon, H. A. (2019). *The sciences of the artificial* (Reissue of the 3rd ed., with a new introduction by John Laird). MIT Press.
- Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12(2), 257–285.

Unit 4. Future Directions in AI-Mediated Learning Theory: What/Who Counts as a Learner—and What Counts as Learning and Development in the 21st century?

Duckor, B., & Holmberg, C. (2025). Five Pillars of Ethical AI Use for Teaching and Learning. *Kappan* 107 (3–4), 14–18.

Duckor, B., & Holmberg, C. (2026). *AI and deeper learning: Promises, paradoxes, and evolving practices*. Harvard Education Press. Chapter 1: “Educating the Learner.”

Duckor, B., & Holmberg, C. (2026). *AI and deeper learning: Promises, paradoxes, and evolving practices*. Harvard Education Press. Chapter 2: “Foundations.”

Gerlich, M. (2025). From offloading to engagement: An experimental study on structured prompting and critical reasoning with generative AI. *Data*, 10(11), Article 172.

Murati, E. (2022). Language and coding creativity. *Daedalus*, 151(2), 156–167.

Reich, J. (2020). *Failure to disrupt: Why technology alone can’t transform education*. Harvard University Press.