Syllabus

Course Overview

In this course, you will examine how paradigms including behaviorism, cognitivism constructivism, identity, design-based, humanism, and 21st century skill theories have relevance and application to current practices in education. In addition, you will explore child development theory as it relates to brain-based learning and teaching at various age levels. By leveraging your knowledge of these areas, you can make informed, strategic decisions about the direction of your teaching in your own setting.

Kaltura Media

In this course, you have the option to create one or more assignments using Kaltura Media. Refer to Using Kaltura [PDF] for more information about this courseroom tool.

Note: If you require the use of assistive technology or alternative communication methods to participate in these activities, please contact Disability Services to request accommodations.

Course Competencies **(Read Only)**

To successfully complete this course, you will be expected to:

1. Integrate research, theories, and models addressing how students learn at different ages and developmental levels.
2. Integrate research, theories, and models addressing curriculum design and teaching in different content disciplines.
3. Analyze brain-based learning (BBL) theory and principles and their implications for student learning, teaching, curriculum design, and student assessment.
4. Assess how learning with technology affects the learning process.

Course Prerequisites

There are no prerequisites for this course.

Syllabus ›› Course Materials

Required

The materials listed below are required to complete the learning activities in this course.

Integrated Materials

Once the Capella University Bookstore opens for the quarter, as a registered learner you will receive an e-mail containing a direct link you can use to obtain your materials. Please follow the instructions provided to you by the bookstore to download digital materials. Some materials are available only in hard-copy format and will be shipped to you. The bookstore will indicate any materials that may involve shipping.

Book

Sousa, D. A. (2017). *How the brain learns* (5th ed.). Thousand Oaks, CA: Corwin. ISBN: 9781506346304.

Library

The following required readings are provided in the Capella University Library or linked directly in this course. To find specific readings by journal or book title, use Journal and Book Locator. Refer to the Journal and Book Locator library guide to learn how to use this tool.

- Bahmaee, A. B., Saadatmand, Z., & Yarmohammadian, M. H. (2016). Principle elements of curriculum in the preschool pattern of Montessori. *International Education Studies, 9*(1), 148–153.
- Davidson, N., & Major, C. H. (2014). Boundary crossings: Cooperative learning, collaborative learning, and problem-based learning. *Journal on Excellence in College Teaching, 25*(3/4), 7–55.
- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, 92*(6), 1087–1101.
- Ertmer, P. A., & Newby, T. J. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly, 26*(2), 43–71.
- Farrell, T. S. C., & Jacobs, G. M. (2016). Practicing what we preach: Teacher reflection groups on cooperative learning. *Teaching English as a Second or Foreign Language, 19*(4), 1–9.
- Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. *Educational Researcher, 38*(5), 365–379.
- Kalyuga, S., & Liu, T. (2015). Managing cognitive load in technology-based learning environments. *Journal of Educational Technology and Society, 18*(4), 1–8.
- Lillard, A. S. (2013). Playful learning and Montessori education. *American Journal of Play, 5*(2), 157–196.
- Mayer, R. E., & Moreno, R. (1998). A split-attention effect in multimedia learning: Evidence for dual processing systems in working memory. *Journal of Educational Psychology, 90*(2), 312–320.
- Moreno, R., & Mayer, R. E. (1999). Cognitive principles of multimedia learning: The role of modality and contiguity. *Journal of Educational Psychology, 91*(2), 358–368.
- Schmidt, S. M. P., & Ralph, D. L. (2016). The flipped classroom: A twist on teaching. *Contemporary Issues In Education Research, 9*(1), 1–6.
- Tenenbaum, S. (1959). Carl R. Rogers and non-directive teaching. *Educational Leadership*, *16*(5), 296–328.
- Wheeler, S. (2015). *Learning with 'e's: Education theory and practice in the digital age.* Carmathen, Whales: Crown House Publishing.
- Wolfe, P. (2010). *Brain matters: Translating research into classroom practice.* Alexandria, VA: ASCD.

External Resource

Please note that URLs change frequently. While the URLs were current when this course was designed, some may no longer be valid. If you cannot access a specific link, contact your instructor for an alternative URL. Permissions for the following links have been either granted or deemed appropriate for educational use at the time of course publication.

- Alber, R. (2014, March 31). Five ways to give your students more voice and choice. Retrieved from https://www.edutopia.org/blog/five-strategies-more-voice-choice-students-rebecca-alber. Originally published 2014 Edutopia.org; George Lucas Educational Foundation.
- Barnett, A. (2015, October 13). *Behaviorism: Pavlov, Watson, and Skinner* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=xvVaTy8mQrg
- Bergmann, J. (2014, November 14). Flipped-learning toolkit: Flipping the non-flippable classes. Retrieved from https://www.edutopia.org/blog/flipping-the-non-flippable-classes-jon-bergmann. Originally published 2014 Edutopia.org; George Lucas Educational Foundation.
- Blended Learning Universe. (n.d.). Blended learning models. Retrieved from http://www.blendedlearning.org/models/#ind
- Byrdseed. (n.d.). Build on their strengths with inductive learning. Retrieved from http://www.byrdseed.com/inductive-intro/
- California Department of Education. (2000). Ages and stages of development. Retrieved from http://www.cde.ca.gov/sp/cd/re/caqdevelopment.asp
- CDM Child Development Media. (n.d.). Play: The work of Lev Vgotsky. Retrieved from http://www.childdevelopmentmedia.com/articles/play-the-work-of-lev-vygotsky/
- Cornell University Center for Teaching Excellence. (n.d.). Collaborative learning: Group work. Retrieved from https://www.cte.cornell.edu/teaching-ideas/engaging-students/collaborative-learning.html
- Dewey, J. (2006). Experience and education [PDF]. Retrieved from http://www.schoolofeducators.com/wp-content/uploads/2011/12/EXPERIENCE-EDUCATION-JOHN-DEWEY.pdf
- Educational Broadcasting Corporation. (2004). Three constructivist design models. Retrieved from http://www.thirteen.org/edonline/concept2class/constructivism/implementation_sub1.html
- Educational Broadcasting Corporation. (2004). What are cooperative and collaborative learning? Retrieved from http://www.thirteen.org/edonline/concept2class/coopcollab/
- Edutopia. (2008, February 27). *The heart-brain connection: The neuroscience of social, emotional, and academic learning* [Video]. Retrieved from https://www.edutopia.org/richard-davidson-sel-brain-video. Originally published 2008 Edutopia.org; George Lucas Educational Foundation.
- Edutopia. (2016, July 20). Multiple intelligences: What does the research say? Retrieved from https://www.edutopia.org/multiple-intelligences-research. Originally published 2016 Edutopia.org; George Lucas Educational Foundation.
- Edutopia. (2016, November 1). Solving real-world issues through problem-based learning. Retrieved from https://www.edutopia.org/practice/solving-real-world-issues-through-problem-based-learning. Originally published 2016 Edutopia.org; George Lucas Educational Foundation.
- Edutopia. (n.d.). Multiple intelligences self-assessment. Retrieved from https://www.edutopia.org/multiple-intelligences-assessment. Originally published n.d. Edutopia.org; George Lucas Educational Foundation.
- Flippen, C. H. (2014). Educational technology and learning theories: Cognitivism. Retrieved from http://edtechtheory.weebly.com/cognitivism.html
- George Lucas Educational Foundation. (n.d.). Edutopia. Retrieved from https://www.edutopia.org/
- Holland, B. (2017, February 22). Are we innovating, or just digitizing traditional teaching? Retrieved from https://www.edutopia.org/article/are-we-innovating-or-just-digitizing-traditional-teaching-beth-holland. Originally published 2017 Edutopia.org; George Lucas Educational Foundation.
- Internet Encyclopedia of Philosophy. (n.d.). John Dewey (1859–1952). Retrieved from http://www.iep.utm.edu/dewey/
- Itslearning marketing. (May 24, 2013). *Blended learning in 2 minutes and 38 seconds* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=Q5txJfv2q0c
- Jensen, E. (n.d.). Brain-based lesson planning strategies. Retrieved from http://www.brainbasedlearning.net/brain-based-lesson-planning-strategies/
- Johnson, D. W., & Johnson, R. T. (n.d.). An overview of cooperative learning. Retrieved from http://www.co-operation.org/what-is-cooperative-learning
- Killian, S. (2014, July 7). The myths and facts about direct instruction. Retrieved from http://www.evidencebasedteaching.org.au/direct-instruction-facts-myths/
- Kivunja, C. (2015). Teaching students to learn and to work well with 21st century skills: Unpacking the career and life skills domain of the new learning paradigm. *International Journal of Higher Education, 4*(1), 1–11. Retrieved from http://www.sciedu.ca/journal/index.php/ijhe/article/view/5694
- Lalima, K. L. D. (2017). Blended learning: An innovative approach [PDF]. *Universal Journal of Educational Research, 5*(1), 129–136. Retrieved from http://www.hrpub.org/download/20161230/UJER16-19508256.pdf
- Learning-Theories.com. (n.d.). 21st century skills (P21 and others). Retrieved from https://www.learning-theories.com/21st-century-skills-p21-and-others.html
- Learning-Theories.com. (n.d.). Erikson's stages of development. Retrieved from https://www.learning-theories.com/eriksons-stages-of-development.htm
- Learning-Theories.com. (n.d.). Intrinsically motivating instruction (Malone). Retrieved from https://www.learning-theories.com/intrinsically-motivating-instruction-malone.html
- Learning-Theories.com. (n.d.). Self-theories (Dweck). Retrieved from https://www.learning-theories.com/self-theories-dweck.html
- Learning-Theories.com. (n.d.). E-learning theory (Mayer, Sweller, Moreno). Retrieved from https://www.learning-theories.com/e-learning-theory-mayer-sweller-moreno.html
- Learning-Theories.com. (n.d.). Mindset theory – fixed vs. growth mindset (Dweck). Retrieved from https://www.learning-theories.com/mindset-theory-fixed-vs-growth-mindset-dweck.html

- Learning-Thories.com. (n.d.). Multiple intelligences theory (Gardner). Retrieved from https://www.learning-theories.com/gardners-multiple-intelligences-theory.html
- Learning-Thories.com. (n.d.). Self-perception theory (Bem). Retrieved from https://www.learning-theories.com/self-perception-theory-bem.html
- Learning-Thories.com. (n.d.). Social identity theory (Tajfel, Turner). Retrieved from https://www.learning-theories.com/social-identity-theory-tajfel-turner.html
- Logan, B. (2015). Deep exploration of the flipped classroom before implementing. *Journal of Instructional Pedagogies*, *16*. Retrieved from http://files.eric.ed.gov/fulltext/EJ1106741.pdf
- McCleod, S. (2016). Maslow's hierarchy of needs. Retrieved from http://www.simplypsychology.org/maslow.html
- McLeod, S. (2008). Social identity theory. Retrieved from http://www.simplypsychology.org/social-identity-theory.html
- McLeod, S. (2013). Kolb – learning styles. Retrieved from http://www.simplypsychology.org/learning-kolb.html
- McLeod, S. (2015). Jean Piaget. Retrieved from http://www.simplypsychology.org/piaget.html
- Miller, A. (n.d.). Brain-based learning with technical support [PDF]. Retrieved from http://files.eric.ed.gov/fulltext/ED485052.pdf
- National Institute for Direct Instruction. (n.d.). Basic philosophy of direct instruction. Retrieved from https://www.nifdi.org/what-is-di/basic-philosophy
- National Institute for Direct Instruction. (n.d.). Common myths and misconceptions. Retrieved https://www.nifdi.org/what-is-di/common-myths-misconceptions
- National Institute for Direct Instruction. (n.d.). DI vs. di: The term "direct instruction." Retrieved https://www.nifdi.org/what-is-di/di-vs-di
- P21 Partnership for 21st Century Learning. (n.d.). The 4Cs research series. Retrieved from http://www.p21.org/our-work/4cs-research-series
- PBS NewsHour. (December 11, 2013). *What a "flipped" classroom looks like* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=G_p63W_2F_4
- Reynolds, C. (2013, December 18). *The 3 minute Kolb* [Video]. Retrieved from https://www.youtube.com/watch?v=ObQ2DheGOKA
- Sprouts. (2015, October 12). *Experiential learning* [Video]. Retrieved from https://www.youtube.com/watch?v=aF63HHVbpQ8
- Sprouts. (2015, September 28). *The flipped classroom model* [Video]. Retrieved from https://www.youtube.com/watch?v=qdKzSq_t8k8
- Sprouts. (2016, April 15). *Growth mindset vs. fixed mindset* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=KUWn_TJTrnU
- Sprouts. (2017, January 5). *Maslow's hierarchy of needs* [Video]. Retrieved from https://www.youtube.com/watch?v=O-4ithG_07Q
- SSHRC-CRSH. (2015, April 1). *Caylee Raber: Design-based learning for K-12 classrooms* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=60N9Oyr-Bqw
- Stanford. (2015, November 3). *Carol Dweck: Teaching a growth mindset* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=isHM1rEd3GE
- Tedx Talks. (2009, November 12). *Angela Lee Duckworth: True grit: Can perseverance be taught?* [Video]. Retrieved from https://www.youtube.com/watch?v=qaeFnxSfSC4
- TEDx Talks. (2013, December 5). *Nathaniel Bott: 21st century learning* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=UI9TiuVHc0A
- TEDx Talks. (2013, February 12). *Logan LaPlante: Hackschooling makes me happy* [Video]. Retrieved from https://www.youtube.com/watch?v=h11u3vtcpaY
- TEDx Talks. (2013, March 20). *Grant Lichtman: What 60 schools can tell us about teaching 21st century skills* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=UZEZTyxSl3g
- TEDx Talks. (2013, November 21). *Anthony Fleck: Discovery learning* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=C4IZT1vVJ0Y
- TEDx Talks. (2014, November 3). *Eric Sheninger: Schools that work for kids* [Video]. Retrieved from https://www.youtube.com/watch?v=mwrLVvORugw
- Tedx Talks. (2015, April 2). *Tesia Marshik: Learning styles and the importance of critical self-reflection* [Video]. Retrieved from https://www.youtube.com/watch?v=855Now8h5Rs&t=599s
- TEDx Talks. (2015, December 10). *Howard Gardner: Beyond wit and grit: Rethinking the keys to success* [Video]. Retrieved from https://www.youtube.com/watch?v=IfzrN2yMBaQ
- TEDx Talks. (2015, December 14). *Lara Boyd: After watching this, your brain will not be the same* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=LNHBMFCzznE
- Tedx Talks. (2016, April 6). *Anita Acai: Misconceptions of learning styles* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=gzFQwFfXVMI
- TEDxTalks. (2015, October 13). *Kayla Delzer: Reimagining classrooms: Teachers as learners and students as leaders* [Video]. Retrieved from https://www.youtube.com/watch?v=w6vVXmwYvgs
- Texas Instruments. (2012, July 6). *Texas Instruments – 2012 T3 International Conference keynote presentation* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=dxWYFMTIfRE
- The Exchange. (n.d.). Curriculum overview. Retrieved from http://gototheexchange.ca/index.php/curriculum-overview/curriculum-models-and-design-principles
- The Meemic Foundation. (n.d.). Grant opportunities. Retrieved from https://www.meemic.com/the-meemic-foundation/grant-opportunities.aspx
- Uncapher, M. (2016, October 14). The science of effective learning spaces. Retrieved from https://www.edutopia.org/article/science-of-effective-learning-spaces-melina-uncapher. Originally published 2016 Edutopia.org; George Lucas Educational Foundation.
- Wikispaces. (n.d.). Sample understanding by design lesson plan: A model for understanding by design. Retrieved from https://backward-design-model.wikispaces.com/Sample+Understanding+by+Design+lesson+plan
- Wilson, D., & Conyers, M. (2017, January 18). Helping struggling students build a growth mindset. Retrieved from https://www.edutopia.org/article/helping-struggling-students-build-growth-mindset-donna-wilson-marcus-conyers. Originally published 2017 Edutopia.org; George Lucas Educational Foundation.
- Duckworth, A. (n.d.). Grit scale. Retrieved from http://angeladuckworth.com/grit-scale/

Suggested

The following materials are recommended to provide you with a better understanding of the topics in this course. These materials are not required to complete the course, but they are aligned to course activities and assessments and are highly recommended for your use.

Optional

The following optional materials are offered to provide you with a better understanding of the topics in this course. These materials are not required to complete the course.

Integrated Materials

Hardware

Capella University requires learners to meet certain minimum computer requirements. The following hardware may go beyond those minimums and is required to complete learning activities in this course. **Note:** If you already have the following hardware, you do not need to purchase it. Visit the Course Materials page on Campus for more information.
Kaltura

1. External or built-in microphone
2. External or built-in webcam

Library

The following optional readings may be available in the Capella University Library. To find specific readings by journal or book title, use Journal and Book Locator. Refer to the Journal and Book Locator library guide to learn how to use this tool. If the full text is not available, you may be able to request a copy through the Interlibrary Loan service.

- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1–26.
- Bruner, J. S. (1963). Needed: A theory of instruction. *Educational Leadership, 20*(8), 523–532.
- Mooney, C. G. (2013). *Theories of childhood: An introduction to Dewey, Montessori, Erikson, Piaget, and Vygotsky* (2nd ed.). St Paul, MN: Redleaf Press.
- Pawlicki, D., & James, C. (2014). *The insider's guide to winning education grants.* San Francisco, CA: Jossey-Bass.

External Resource

Please note that URLs change frequently. While the URLs were current when this course was designed, some may no longer be valid. If you cannot access a specific link, contact your instructor for an alternative URL. Permissions for the following links have been either granted or deemed appropriate for educational use at the time of course publication.

- Barnett, A. (2015, October 14). *Behaviorism: Part 2* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=eLaa8cgljKk
- Buck Institute for Education. (2010, December 9). *Project based learning: Explained* [Video]. Retrieved from https://www.youtube.com/watch?v=LMCZvGesRz8
- Friesen, S. (2013). Inquiry-based learning: A review of the research literature. Alberta Ministry of Education.
- Li, Na. (2012). Approaches to learning: Literature review. Retrieved from http://www.ibo.org/globalassets/publications/ib-research/approachestolearningeng.pdf
- McLeod, S. (2016). Behaviorist approach. Retrieved from http://www.simplypsychology.org/behaviorism.html
- Pavlov, I. P. (1927). *Conditioned reflexes: An investigation of the physiological activity of the cerebral cortex* (G. V. Anrep, Trans.). Oxford, England: Oxford University Press. Available at http:\s-f-walker.org.uk\pubsebooks\pdfs\Conditioned-Reflexes-Pavlov.pdf
- Ted-Ed. (2013, March 7). *Peggy Andover: The difference between classical and operant conditioning* [Video]. Retrieved from https://www.youtube.com/watch?v=H6LEcM0E0io
- Vygotsky, L. S. (1986). *Thought and language*. Cambridge, MA: M.I.T. Press.
- Watson, J. B. (1913). Psychology as the behaviorist views it. Available at http://psychclassics.yorku.ca/Watson/views.htm

Unit 1 >> How the Brain Learns; Teaching, Learning, and Self-Assessment

Introduction

In this unit, you will explore your initial thoughts on teaching, learning, and how our brains learn best. You will self-assess your own understanding and share with your colleagues your initial experiences and thoughts on the concepts. We understand that we all have our own individual experiences as learners, and they shape how we view education and teaching. It is important to reflect on this as we begin to learn about different theories and how personal experiences shape us as educators.

Learning Activities

u01s1 - Your Online ePortfolio

Online ePortfolios serve two key purposes: 1) to support learning and reflection, and 2) to be used as a showcase tool. Your learning journey can be documented, and ePortfolios contribute to lifelong learning and growth through reflection and sharing. Online ePortfolios can also be shared with employers and peers to present artifacts that demonstrate your accomplishments at Capella.

Using ePortfolio to Prepare for Your Capstone

Your particular program or specialization in the School of Education may culminate in a capstone course.

At that time you will be required to show evidence of your learning throughout the program by referring to multiple assessments you have created. You will be telling a story about your learning throughout the program using artifacts you have collected during many of these courses.

Using ePortfolio to Build Your Career

As you are preparing to tell your story in the professional world, leverage your ePortfolio artifacts to demonstrate the knowledge and competencies you have gained through your program in professional conversations, performance reviews, and interviews.

- To do that, reflect on the knowledge and skills you have gained from your courses and the elements you have put in your portfolio, along with how you have already applied these things to your professional life or how you might apply them in the future.
- Next, create your story or talking points to tell your professional story.

Saving Your Documents to ePortfolio

You will need a place to store your documents in an organized fashion so you can access them at a later date. **Do not rely on the courseroom to store your assignments for you as you will lose access to the courseroom after you have completed the course.** Capella uses a cloud-based portfolio platform to facilitate your organization of the artifacts you create throughout your program.

To make an online portfolio useful, it is essential that it is organized clearly and that important files of any format are accessible. Read the Online ePortfolio Guidelines to ensure you set up your online portfolio correctly.

u01s2 - Studies

Brain-Based Learning

As you explore these three resources related to learning science and brain-based perspectives on learning, consider how the observations made relate to your own experiences as a teacher and as a learner.

- Sousa, D. A. (2017). *How the brain learns* (5th ed.). Thousand Oaks, CA: Corwin.
  - Introduction.
  - Chapter 1, "Basic Brain Facts." Complete the following self-assessments:
    - What Do You Already Know?
    - How Brain-Compatible Is My Teaching/School/District?
- TEDx Talks. (2015, December 14). *Lara Boyd: After watching this, your brain will not be the same* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=LNHBMFCzznE
- Texas Instruments. (2012, July 6). Texas Instruments – 2012 T3 International Conference Keynote | Transcript. Retrieved from https://www.youtube.com/watch?v=dxWYFMTIfRE

- Dr. Sousa is the author of the text we will be using for the course. He has spent years researching how the brain learns. In this keynote address he discusses many of the topics that will be discussed in the 5th edition of his book. The video provides a nice background for us to start from.

Learning Theories – An Overview

Click **100 Years of Learning Theory** to see a timeline overview of key theorists who still influence much of teaching practice today. Use this overview of theorists to help identify those you are familiar with as well as those you might want to examine further by using one of the suggested resources below for further study.

Optional Resources for Further Exploration

As a practicing teacher, you undoubtedly already have at least some knowledge or background in foundational educational psychology theorists. Review the following resources according to your own interests and needs, depending on the level of background you have related to educational psychology and learning theorists.

- Li, Na. (2012). Approaches to learning: Literature review. Retrieved from http://www.ibo.org/globalassets/publications/ib-research/approachestolearningeng.pdf
- Mooney, C. G. (2013). *Theories of childhood: An introduction to Dewey, Montessori, Erikson, Piaget, and Vygotsky* (2nd ed.). St Paul, MN: Redleaf Press.
  - This resource is available in the Capella library.

Course Resources

100 Years of Learning Theory

u01s2 - Learning Components

- Understand early learning theories in relationship to newer theories and ways of thinking about education, including brain-based learning.
- Consider how differences related to age or developmental levels affect the teaching and learning needs of students.

u01d1 - Introductions: Your Experience as a Student

As we look at learning theories and brain research, we will begin by connecting personally with our own learning experiences and later relate them to the theories we learned about throughout the course. Respond to the following for this discussion. You can complete your post in written format or, alternatively, in audio or video format using Kaltura Media. Note that it can take up to three days for Kaltura to generate closed captions for your video, and plan accordingly.

- Introduce yourself personally and professionally to your course colleagues.
- Share what you hope to learn from the course as well as any questions you may have regarding the content of the course.
- Reflect on the best academic experience you have ever had. What was it about the experience that made a lasting positive impression upon you? Was it your teacher? Was it the classroom environment? Was it the content?

Response Guidelines

Respond to at least two other learners. Compare and contrast your experiences with your colleagues, finding connections based on those similar experiences.

Course Resources

Disability Services

Using Kaltura [PDF]

u01d1 - Learning Components

- Reflect on your own experiences as a learner and a teacher related to teaching effectively.

u01d2 - Are Teachers Keeping Up With Today's Student Needs?

Page 35 of the Sousa (2017) text asks, "Have schools changed with the environment?" As noted in your text, research in 2014 stated that many students in grades 6–12 found school boring.

- What are your thoughts and experiences relating to the way in which teachers present curriculum to students in today's educational environments?
- To what extent have teachers evolved their practices to address how today's students learn and want to learn?

Response Guidelines

Respond to at least two of your colleagues. Where do you agree or disagree with the positions taken?

Reference

Sousa, D. A. (2017). *How the brain learns* (5th ed.). Thousand Oaks, CA: Corwin.

u01d2 - Learning Components

- Examine teaching practices to identify potential strengths or weaknesses in meeting student learning needs.

u01d3 - Your Knowledge of Brain-Based Learning

After completing the self-assessments What Do You Already Know? and How Brain-Compatible Is My Teaching/School/District? in your course textbook, share your thoughts on your results.

- What is your level of understanding and application of brain-based learning?
- Is this a new concept for you?
- Do you have any background or teaching in brain-based learning models (BBL)?If you are familiar with BBL, what Web sites or resources have you found helpful that you might share with your colleagues in this course? (You are encouraged to share links to these resources.)

Response Guidelines

Respond to at least two other learners. How might the application of brain-based learning mentioned by the learners apply in your setting? Take a look at any resources shared. In what ways might they be useful to you?

u01d3 - Learning Components

- Assess your familiarity with brain-based learning concepts.

Unit 2 >> Behaviorism and Brain Development

Introduction

Behaviorism is a theory that operates on the principle of stimulus response. The theory focuses on observable behavior and suggests that all behavior is caused by external stimuli (operant conditioning). Behaviorism is also called learning theory because it describes the laws and processes by which behavior is learned. In this unit, we will examine the learning theory of behaviorism and its implications on current educational environments. Interwoven with these concepts in Unit 2 is the brain research on stimulus-response.

Learning Activities

u02s1 - Studies

Brain-Based Learning

Furthering our examination of the brain-based viewpoint on learning, complete the following from the Sousa text. Pay particular attention to the section "Variations in Processing with Age," an important component to consider as you think about how teaching might need to differ across different age or developmental levels.

- Sousa, D. A. (2017). *How the brain learns* (5th ed.). Thousand Oaks, CA: Corwin.
  - Read Chapter 2, "How the Brain Processes Information." Complete the Determining Your Sensory Preferences survey in the Practitioner's Corner section.

Behaviorism

The following articles and sites provide helpful summaries of early learning theorists that are still influential.

- Ertmer, P. A., & Newby, T. J. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly, 26*(2), 43–71.
- Barnett, A. (2015, October 13). Behaviorism: Pavlov, Watson, and Skinner | Transcript. Retrieved from https://www.youtube.com/watch?v=xvVaTy8mQrg

Ages and Stages of Development

- Learning-Theories.com. (n.d.). Erikson's stages of development. Retrieved from https://www.learning-theories.com/eriksons-stages-of-development.htm
- California Department of Education. (2000). Ages and stages of development. Retrieved from http://www.cde.ca.gov/sp/cd/re/caqdevelopment.asp

Optional Resources for Further Exploration of Early Learning Theorists

Operant and Classical Conditioning

- Ted-Ed. (2013, March 7). *Peggy Andover: The difference between classical and operant conditioning* [Video]. Retrieved from https://www.youtube.com/watch?v=H6LEcM0E0io

Pavlov

- Pavlov, I. P. (1927). *Conditioned reflexes: An investigation of the physiological activity of the cerebral cortex* (G. V. Anrep, Trans.). Oxford, England: Oxford University Press. Available at http:\s-f-walker.org.uk\pubsebooks\pdfs\Conditioned-Reflexes-Pavlov.pdf
- Barnett, A. (2015, October 13). Behaviorism: Pavlov, Watson, and Skinner | Transcript. Retrieved from https://www.youtube.com/watch?v=xvVaTy8mQrg

Bandura

The following resource is available in the Capella library:

- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1–26.

Watson

- Watson, J. B. (1913). Psychology as the behaviorist views it. Available at http://psychclassics.yorku.ca/Watson/views.htm
- McLeod, S. (2016). Behaviorist approach. Retrieved from http://www.simplypsychology.org/behaviorism.html

Skinner

- Barnett, A. (2015, October 14). Behaviorism: Part 2 | Transcript. Retrieved from https://www.youtube.com/watch?v=eLaa8cgljKk

u02s1 - Learning Components

- Examine early learning theories related to current brain-based learning research.
- Compare different abilities or capacities across different ages and developmental levels.

u02s2 - Discussion Preparation

In preparation for your discussion in this unit, complete the Determining Your Sensory Preferences survey in the Practitioner's Corner section of Chapter 2 in the Sousa text.

u02s3 - Optional Activity: Applying Teaching Strategies at Different Ages

Consider the use of three commonly used strategies: brain breaks, reflective practice, and differentiated stations. To explore these strategies and how they would benefit different grade levels, click **Applying Teaching Strategies at Different Ages and Stages of Development** to view a media piece.

Course Resources

Applying Teaching Strategies at Different Ages and Stages of Development

u02d1 - Early Learning Theories in Today's Teaching

Considering different early learning theories, share your thoughts on and experiences with the following:

- Where do you see early learning theories present in today's classroom?
- Are these theories and applications still relevant in today's educational environments? Are there any theories you believe may no longer be relevant to today's teaching environment?
- Do you find behaviorism in behavior management models in your setting?
- Give examples of where behaviorism may be present in an educational setting in the 21st century.

Response Guidelines

Respond to at least two learners. Compare and contrast your perspectives and experiences to those of your colleagues, and make any additional or relevant comments based on your own experiences in your educational setting.

u02d1 - Learning Components

- Examine early learning theories related to current brain-based learning research.
- Assess the relevancy of early learning theories on 21st century teaching practices.

u02d2 - Sensory Preferences

Complete the Determining Your Sensory Preferences survey in the Sousa text before addressing the following questions.

- What are your learning preferences? Were you surprised to discover this?
- How does this preference show up in your daily life?
- How does this (could this) preference show up in your teaching?

Response Guidelines

Respond to at least two other learners, asking questions or providing perspectives to further the conversation. Compare and contrast your colleagues' learning preferences with your own. How could these different learning perspectives translate to your educational setting?

u02d2 - Learning Components

- Explore the potential impact of sensory preferences on teaching practice.

Unit 3 >> Cognitivism and Brain Research on Memory and Retention

Introduction

Cognitivism focuses on how our thoughts influence our attitudes, beliefs, and behavior. This theory moved to the forefront as a dominant theory in the 1960s. The mind is viewed as a “black box,” and mental processes are examined such as thinking, memory, knowing, and problem solving. Learning is the result of a change in the learner's schema, or structure of understanding. You will see the brain-based application as you understand more deeply the research on memory and retention as you synthesize the theories.

Learning Activities

u03s1 - Studies

Brain-Based Learning Concepts

Furthering our examination of brain-based viewpoint on learning, read the following:

- Sousa, D. A. (2017). *How the brain learns* (5th ed.). Thousand Oaks, CA: Corwin.
  - Chapter 3, "Memory, Retention, and Learning."
  - Chapter 5, "Brain Organization and Learning."
- Wolfe, P. (2010). *Brain matters: Translating research into classroom practice.* Alexandria, VA: ASCD.
  - Chapter 1, "Opening the Black Box of the Brain."

Cognitivism

The following resources you saw earlier in this course included reference to cognitive theorists. Review these with that focus in mind.

- Ertmer, P. A., & Newby, T. J. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly, 26*(2), 43–71.
- Flippen, C. H. (2014). Educational technology and learning theories: Cognitivism. Retrieved from http://edtechtheory.weebly.com/cognitivism.html

u03s1 - Learning Components

- Examine teaching strategies that support student learning at different ages and developmental levels.
- Investigate how different brain processes affect learning abilities.
- Assess the relevancy of early learning theories to today's teaching practice.

u03s2 - Assignment Preparation

You will submit your first assignment in Unit 4. Read the assignment instructions and scoring guide in Unit 4 to familiarize yourself with the expectations.

Kaltura Media Setup

One of your options for your assignment involves using Kaltura to create and upload a recorded presentation. If you will be choosing that option, complete the following:

- If you have not already done so, set up and test your microphone and webcam, using the installation instructions provided by the manufacturer.
- Practice using the microphone and webcam to ensure the audio and visual quality is sufficient.
- Refer to the Using Kaltura [PDF] tutorial for directions on recording and/or uploading your presentation in the courseroom.

Note: If you require the use of assistive technology or alternative communication methods to participate in this activity, please contact Disability Services to request accommodations.

Examine Potential Models

For your assignment due in Unit 4, you will choose one of the teaching models below to consider across different age groups in your educational environment. Begin thinking about which model you might want to focus on for your Unit 4 assignment. Examine the resources regarding different teaching models that are associated with different models in educational psychology (noted in parentheses).

Teaching Model: Problem-Based or Project-Based Learning (Constructivism)

- Educational Broadcasting Corporation. (2004). Three constructivist design models. Retrieved from http://www.thirteen.org/edonline/concept2class/constructivism/implementation_sub1.html

Teaching Model: Collaborative/Cooperative (Social)

- Educational Broadcasting Corporation. (2004). What are cooperative and collaborative learning? Retrieved from http://www.thirteen.org/edonline/concept2class/coopcollab/

Teaching Model: Inquiry-Based Learning Model (Information Processing)

- Byrdseed. (n.d.). Build on their strengths with inductive learning. Retrieved from http://www.byrdseed.com/inductive-intro/

Teaching Model: Non-Directive Teaching Model (Personal)

- Tenenbaum, S. (1959). Carl R. Rogers and non-directive teaching. *Educational Leadership*, *16*(5), 296–328.

Teaching Model: Direct Instruction Model (Behavioral Systems)

The following three articles provide an overview of the direct instruction model of teaching.

- National Institute for Direct Instruction. (n.d.). Basic philosophy of direct instruction. Retrieved from https://www.nifdi.org/what-is-di/basic-philosophy
- National Institute for Direct Instruction. (n.d.). Common myths and misconceptions. Retrieved https://www.nifdi.org/what-is-di/common-myths-misconceptions
- National Institute for Direct Instruction. (n.d.). DI vs. di: The term “direct instruction.” Retrieved https://www.nifdi.org/what-is-di/di-vs-di
- Killian, S. (2014, July 7). The myths and facts about direct instruction. Retrieved from http://www.evidencebasedteaching.org.au/direct-instruction-facts-myths/

u03s3 - Optional Activity: Examining Different Teaching Models

As you prepare for your assignment due in Unit 4, you will need to decide which teaching model to focus on based on a number of options that align to different educational psychology paradigms. Click **Examining Different Teaching Models** to complete a media piece to examine different teaching strategies relevant to specific teaching scenarios and applications and how these strategies benefit learning.

Course Resources

Examining Different Teaching Models

u03d1 - Games and Learning

Cognitivism in educational technology can be found in online games and reinforcement activities, such as sorting games, puzzles, and flashcards. These games will often present prior knowledge in a different method, thus creating a need to adapt and learn the new information in order to continue to develop understanding.

Post an example of an educational technology tool that fits within the framework of cognitivism. Share how the tool could be used in your current setting.

Response Guidelines

Respond to at least two other learners. Consider how your colleagues' educational technology tool could fit within your current setting. Add any additional comments based on your own research and/or experience.

u03d1 - Learning Components

- Assess the relevancy of early learning theories on 21st century teaching practices.

Unit 4 >> Constructivism and Brain Research on Learning by Doing

Introduction

Constructivism as a paradigm theorizes that learning is an active, constructive process. The learner constructs his or her own understanding and knowledge of the world through experiencing things and reflecting on those experiences. Constructivism and brain-based learning (BBL) are connected in the application of learning by doing. As you explore both concepts, you will be able to see the connections between constructivism and brain research.

Learning Activities

u04s1 - Studies

Brain-Based Learning and Transferability

Furthering our examination of brain-based viewpoint on learning, read the following:

- Sousa, D. A. (2017). *How the brain learns* (5th ed.). Thousand Oaks, CA: Corwin.
  - Chapter 4, "The Power of Transfer."

Constructivism

Click **Introduction to Constructivism** to launch the media piece providing an overview.

The following video provides an inspiring student perspective on constructivism in action.

- TEDx Talks. (2013, February 12). *Logan LaPlante: Hackschooling makes me happy* [Video]. Retrieved from https://www.youtube.com/watch?v=h11u3vtcpaY

Read these for additional background on constructivism and its relationship to teaching practice.

- CDM Child Development Media. (n.d.). Play: The work of Lev Vgotsky. Retrieved from http://www.childdevelopmentmedia.com/articles/play-the-work-of-lev-vygotsky/
- McLeod, S. (2015). Jean Piaget. Retrieved from http://www.simplypsychology.org/piaget.html
- Internet Encyclopedia of Philosophy. (n.d.). John Dewey (1859–1952). Retrieved from http://www.iep.utm.edu/dewey/
- Bahmaee, A. B., Saadatmand, Z., & Yarmohammadian, M. H. (2016). Principle elements of curriculum in the preschool pattern of Montessori. *International Education Studies, 9*(1), 148–153.
- Lillard, A. S. (2013). Playful learning and Montessori education. *American Journal of Play, 5*(2), 157–196.

Optional Resources for Further Exploration of Educational Psychology Theorists

If you want to explore some of the original works of these key foundational thinkers in educational psychology, you might want to check out the following.

Dewey

- Dewey, J. (2006). Experience and education [PDF]. Retrieved from http://www.schoolofeducators.com/wp-content/uploads/2011/12/EXPERIENCE-EDUCATION-JOHN-DEWEY.pdf

Vygotsky

The following book is not available in the Capella bookstore but is a listed for your reference in case you want to read the original work of Vgotsky.

- Vygotsky, L. S. (1986). *Thought and language*. Cambridge, MA: M.I.T. Press.

u04s1 - Learning Components

- Understand early learning theories in relationship to newer theories and ways of thinking about education, including brain-based learning.
- Investigate constructivism and the implications for education based on the literature.

u04s2 - Assignment Preparation

Potential Models for Unit 4 Assignment

In preparation for this week's assignment, last week you were provided with the links below addressing different teaching models that are associated with different models in educational psychology (noted in parenthesis below). If you have not already done so, examine these models and choose one of them to focus on for your assessment.

Teaching Model: Problem-Based or Project-Based Learning (Constructivism)

- Educational Broadcasting Corporation. (2004). Three constructivist design models. Retrieved from http://www.thirteen.org/edonline/concept2class/constructivism/implementation_sub1.html

Teaching Model: Collaborative/Cooperative (Social)

- Educational Broadcasting Corporation. (2004). What are cooperative and collaborative learning? Retrieved from http://www.thirteen.org/edonline/concept2class/coopcollab/

Teaching Model: Inquiry-Based Learning Model (Information Processing)

- Byrdseed. (n.d.). Build on their strengths with inductive learning. Retrieved from http://www.byrdseed.com/inductive-intro/

Teaching Model: Non-Directive Teaching Model (Personal)

- Tenenbaum, S. (1959). Carl R. Rogers and non-directive teaching. *Educational Leadership*, *16*(5), 296–328.

Teaching Model: Direct Instruction Model (Behavioral Systems)

The following three articles provide an overview of the direct instruction model of teaching.

- National Institute for Direct Instruction. (n.d.). Basic philosophy of direct instruction. Retrieved from https://www.nifdi.org/what-is-di/basic-philosophy
- National Institute for Direct Instruction. (n.d.). Common myths and misconceptions. Retrieved https://www.nifdi.org/what-is-di/common-myths-misconceptions
- National Institute for Direct Instruction. (n.d.). DI vs. di: The term “direct instruction.” Retrieved https://www.nifdi.org/what-is-di/di-vs-di
- Killian, S. (2014, July 7). The myths and facts about direct instruction. Retrieved from http://www.evidencebasedteaching.org.au/direct-instruction-facts-myths/

u04a1 - Teaching Students at Different Ages and Developmental Levels

By successfully completing this assignment, you will demonstrate your proficiency in the following course competency and assignment scoring guide criteria:

- Competency 1: Integrate research, theories, and models addressing curriculum design and teaching in different content disciplines.
  - Summarize key considerations related to teaching effectively at different ages and developmental levels.
  - Assess teaching practices according to research, theories, and models addressing how students learn at different ages and developmental levels.
  - Distinguish teaching strategies that support student learning at different ages and developmental levels.

Instructions

For this assignment, choose one of the two options below. These assignment options provide two different ways for you to integrate your knowledge of key research, theories, and models related to teaching effectively to reach students at different ages and developmental levels.

Step 1. Choose a Teaching Model

For either option, you will also choose a particular teaching strategy to apply related to one of the specific families of educational psychology. In the last unit, you were provided with resources associated with each of these models for you to consider.

- **Social.**
  - Teaching Model: Collaborative/Cooperative.
- **Information Processing.**
  - Teaching Model: Inquiry-Based Learning Model.
- **Personal.**
  - Teaching Model: Non-Directive Teaching Model.
- **Behavioral Systems.**
  - Teaching Model: Direct Instruction Model.
- **Constructivism.**
  - Problem-Based or Project-Based Learning.

Step 2. Choose an Assignment Option to Complete

Option 1. Presentation of a Teaching Model Across Different Ages

Consider yourself as a content leader or curriculum coordinator of your educational setting, presenting key information to help teachers understand foundational considerations related to teaching effectively at different ages and developmental levels.

The presentation can be in PowerPoint, Prezi, or other media and should be about 10 minutes long. Use Kaltura Media to record your narration and screen capture of your presentation.

Using the paradigms and theories you have examined so far in this course, incorporate developmental theory to present a teaching model to your peers. Explain how a particular teaching model applies across different ages and stages of development, spanning different levels of PK-12 education. Assess how specific teaching strategies are applied in your school environment with its particular student population.

Option 2. Paper Addressing Application of Teaching Model Across Different Ages

Write a 3–5 page paper discussing both research and practical application of theory as it relates to your current school/teaching environment. Do the following:

- Analyze your current teaching/school environment.
- Reflect on the developmental practices that are evident when teachers are working with different age groups, integrating research and theories into your analysis of current practices being employed.
- Evaluate whether the current practices in your educational setting are in line or not aligned with research and theory.

Example assignment: You may use the assignment example, linked in the Resources, to give you an idea of what a Proficient or higher rating on the scoring guide would look like.

Course Resources
Using Kaltura [PDF]
Disability Services
Assignment 4 Example

u04d1 - Sharing Your Analysis

For this discussion, attach or upload your Unit 4 assignment to share with your colleagues and receive feedback. Share either your recording of your presentation if you chose Option 1 or your written analysis if you chose Option 2. If you are sharing your recorded presentation, upload it to the discussion area by following the steps in the Using Kaltura tutorial. Note that it will take up to three days for Kaltura to generate closed captioning of your presentation, and plan accordingly.

Response Guidelines

Provide constructive feedback for at least two colleagues. Ask questions, offer suggestions for improvement, and assess whether the proposed model is supported by research. It is important that everyone receives feedback, so if you notice that a post does not have a response, please respond and provide feedback.

Course Resources

Disability Services

Using Kaltura [PDF]

u04d2 - Learning By Doing

In this unit's studies, you were assigned the TEDx video *Logan LaPlante: Hackschooling Makes Me Happy.* After viewing the video, discuss the following:

- What are your thoughts on learning through doing? What are the benefits and constraints of teaching in a learning-by-doing framework?
- How do the constructivist philosophy and brain-based learning theory overlap?

Response Guidelines

Respond to at least two other learners. Compare and contrast your colleagues' beliefs to your own and offer insight based on your own beliefs and experiences.

Course Resources

Logan LaPlante: Hackschooling Makes Me Happy

u04d2 - Learning Components

- Investigate constructivism and the implications for education based on the literature.
- Assess the relevancy of early learning theories to today's teaching practice.

Unit 5 ›› Collaborative and Cooperative Learning

Introduction

Since the 1960s there has been a growing interest in small group learning and approaches that include learning through and with others. Collaborative and cooperative learning theories are not synonymous, though they do share some commonalities. Collaborative learning is an educational approach to teaching and learning that involves groups of students working together to solve a problem, complete a task, or create a product.

According to Cornell University Center for Teaching Excellence (n.d., para. 1), "Collaborative learning is based on the view that knowledge is a social construct. Collaborative activities are most often based on four principles:

- The learner or student is the primary focus of instruction.
- Interaction and "doing" are of primary importance
- Working in groups is an important mode of learning.
- Structured approaches to developing solutions to real-world problems should be incorporated into learning."

Reference

Cornell University Center for Teaching Excellence (n.d.). Collaborative learning: Group work. Retrieved from https://www.cte.cornell.edu/teaching-ideas/engaging-students/collaborative-learning.html

Learning Activities

u05s1 - Studies

The materials below help distinguish key aspects of collaborative and cooperative teaching models and provide examples of how these have been applied in teaching. As you read through these, think about your own experiences with these approaches and the potential advantages and drawbacks you have noticed.

- Cornell University Center for Teaching Excellence. (2016). Collaborative learning: Group work. Retrieved from https://www.cte.cornell.edu/teaching-ideas/engaging-students/collaborative-learning.html
- Johnson, D. W., & Johnson, R. T. (n.d.). An overview of cooperative learning. Retrieved from http://www.co-operation.org/what-is-cooperative-learning
- Educational Broadcasting Corporation. (2004). Three constructivist design models. Retrieved from http://www.thirteen.org/edonline/concept2class/constructivism/implementation_sub1.html
    - This front page of the "workshop" is a good overview. You may find it interesting to explore the deeper layers of this site for more examples and ideas.
- Davidson, N., & Major, C. H. (2014). Boundary crossings: Cooperative learning, collaborative learning, and problem-based learning. *Journal on Excellence in College Teaching, 25*(3/4), 7–55.
- Farrell, T. S. C., & Jacobs, G. M. (2016). Practicing what we preach: Teacher reflection groups on cooperative learning. *Teaching English as a Second or Foreign Language, 19*(4), 1–9.
- Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. *Educational Researcher, 38*(5), 365–379.
    - Though this article is a bit older, Johnson and Johnson are still the leading researchers in collaborative and cooperative learning.

u05s1 - Learning Components

- Investigate components and applications of cooperative and collaborative learning theories.

u05s2 - Assignment Preparation

In Unit 6 you will submit the Unit Planning assignment in which you will apply a curriculum design approach, learning theory, and brain-based principles to design a unit plan for either your own teaching setting or for simulated teaching. Spend some time this week examining the assignment requirements in Unit 6.

You are encouraged to check out the simulated teaching setting by clicking **Blooming Park Curriculum Design** to view the media piece.

Kaltura Media Setup

One of your options for your assignment in Unit 6 involves using Kaltura to create and upload a recorded walk-through of your unit plan. If you will be choosing that option, complete the following:

- If you have not already done so, set up and test your microphone and webcam, using the installation instructions provided by the manufacturer.
- Practice using the microphone and webcam to ensure the audio and visual quality is sufficient.
- Refer to the Using Kaltura [PDF] tutorial for directions on recording and/or uploading your presentation in the courseroom.

Note: If you require the use of assistive technology or alternative communication methods to participate in this activity, please contact Disability Services to request accommodations.

Course Resources

Blooming Park: Curriculum Design

u05d1 - Challenges and Opportunities of Cooperative Learning

Discuss the following regarding cooperative learning:

- Find and read a peer-reviewed article on grading as it relates to group work and cooperative learning. Then consider the implications, from an educator's viewpoint, and discuss the pros and cons of cooperative learning and collaboration in the classroom, including the unique challenges of grading using this model of teaching.
- In what context and learning environment do you most often see cooperative learning?
- What are the specific challenges of employing this approach in your specific teaching environment?

Response Guidelines

Respond to at least two learners. Reflect on how your colleagues' experiences compare and contrast with your own. Offer suggestions for identified challenges.

u05d1 - Learning Components

- Investigate components and applications of cooperative and collaborative learning theories.

u05d2 - Collaborative Learning for Teachers

Discuss how collaborative learning theory applies with professional educators. Give examples of how collaborative learning can have a powerful impact on teacher learning. To what extent have you experienced this potential?

Response Guidelines

Respond to at least two other learners. Compare and contrast your own experiences with your colleagues' to add insight.

u05d2 - Learning Components

- Investigate components and applications of cooperative and collaborative learning theories.

Unit 6 >> Design-Based Theory; Learning and Approaches to Lesson Planning

Introduction

Design-based learning (DBL), also known as design-based instruction (DBI), is a form of project-based learning in which students learn the curriculum in real time. DBL is a form of problem-based learning that requires the student to develop or design something to solve a problem. This type of learning is common in STEM programs, most often utilized in the classroom in math and science curriculum. Usually involving a hands-on approach, the result is a demonstration of learning of the concept. This problem-based learning approach addresses higher-order thinking skills in the application.

Learning Activities

u06s1 - Studies

Brain-Based Learning Concepts

- Wolfe, P. (2010). *Brain matters: Translating research into classroom practice.* Alexandria, VA: ASCD.
  - Read Chapter 11, "Making Curriculum Meaningful Through Problems, Projects, and Simulations."
- Sousa, D. A. (2017). *How the brain learns* (5th ed.). Thousand Oaks, CA: Corwin.
  - Scan Chapters 5 and 6 to see different teaching strategies relevant to different content areas.
  - Read Chapter 7, "Thinking Skills and Learning."
    - Through the complex thinking processes involved, design-based and discovery learning help push learners to higher-order thinking skills discussed in this chapter.

Design-Based Learning

- SSHRC-CRSH. (2015, April 1). *Caylee Raber: Design-based learning for K-12 classrooms* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=60N9Oyr-Bqw

- Edutopia. (2016, November 1). Solving real-world issues through problem-based learning. Retrieved from https://www.edutopia.org/practice/solving-real-world-issues-through-problem-based-learning. Originally published 2016 Edutopia.org; George Lucas Educational Foundation.

Discovery Learning

> Discovery learning is an inquiry-based, constructivist learning theory that takes place in problem solving situations where the learner draws on his or her own past experience and existing knowledge to discover facts and relationships and new truths to be learned. Students interact with the world by exploring and manipulating objects, wrestling with questions and controversies, or performing experiments. (Learning Theories, n.d., "Key Concepts" section, para. 2)

The following resource focuses on this approach.

- TEDx Talks. (2013, November 21). *Anthony Fleck: Discovery learning* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=C4IZT1vVJ0Y

Resources for Developing Lesson Plans

You may find these resources helpful as you design your unit plan for your assignment due this week.

- Jensen, E. (n.d.). Brain-based lesson planning strategies. Retrieved from http://www.brainbasedlearning.net/brain-based-lesson-planning-strategies/
- Wikispaces. (n.d.). Sample understanding by design lesson plan: A model for understanding by design. Retrieved from https://backward-design-model.wikispaces.com/Sample+Understanding+by+Design+lesson+plan

Curriculum Design Considerations

Since your assignment asks you to design a unit plan, which involves considering broader curricular decisions that arc across multiple lessons, consider different design approaches you might apply. This article provides a variety of aspects to consider (for example, alignments and coherence), as well as different frameworks and approaches.

- The Exchange. (n.d.). Curriculum overview. Retrieved from http://gototheexchange.ca/index.php/curriculum-overview/curriculum-models-and-design-principles

Optional Resources for Further Exploration

- Friesen, S. (2013). Inquiry-based learning: A review of the research literature. Alberta Ministry of Education.
- Buck Institute for Education. (2010, December 9). *Project based learning: Explained* [Video]. Retrieved from https://www.youtube.com/watch?v=LMCZvGesRz8
  - Used with permission from the Buck Institute for Education at http://www.bie.org/
- Bruner, J. S. (1963). Needed: A theory of instruction. *Educational Leadership*, *20*(8), 523–532.
  - This resource is available in the Capella library.

Reference

Learning Theories. (n.d.). Discovery learning (Bruner). Retrieved from https://www.learning-theories.com/discovery-learning-bruner.html

u06s1 - Learning Components

- Investigate different approaches to developing a unit plan.
- Investigate components and applications of design-based learning theory.
- Identify teaching strategies effective for particular content disciplines.
- Examine different approaches to designing curriculum.

u06s2 - Optional Activity: Brain-Based Curriculum Design

Click **Brain-Based Curriculum Design** to view a media piece in which you will make decisions about applications of brain-based strategies to address different learning challenges presented.

Course Resources

Brain-Based Curriculum Design

u06a1 - Unit Planning

By successfully completing this assignment, you will demonstrate your proficiency in the following course competency and assignment scoring guide criteria:

- Competency 2: Integrate research, theories, and models addressing curriculum design and teaching in different content disciplines.
  - Apply a specific curriculum design approach to develop a unit plan.
  - Incorporate effective content-specific teaching strategies into the design of a unit plan.
  - Utilize brain-based learning principles in the design of a unit plan.
  - Apply learning theory to design a unit plan.

Instructions

For this assignment, choose one of the two options below.

Option 1. Apply to Your Educational Setting: Pick a content discipline, age level, and assumed student makeup for a learning environment in which you teach.

Option 2. Apply to the Simulated Educational Setting: Choose a grade level of your choice in the Blooming Park simulation (linked in Resources) and assume a particular content area of your choice.

For either option you choose, create a 5-day content unit plan appropriate for the particular student mix and content area, along with commentary on your choices made while creating the plan.

The Unit Plan

Your unit plan should:

- Apply a specific curriculum design approach to plan the arc of your unit across the lessons.
- Apply components of brain-based principles and learning theory to support the curriculum and lesson plan design you chose.
- Be sure to consider the specific student population you work with or the one provided in the simulation as you design your plan.

Tip: Refer to the Practitioner's Strategies in the Sousa course text to support your planning. Note that Chapters 4–6 of the Sousa text include discussion of content-specific strategies that may be helpful for you to reference.

Explanation of Choices Made

In addition to the plan, you need to explain how your plan applies relevant theories and approaches. To accomplish this, either annotate your unit plan using the comments feature of Word or use Kaltura Media to create a narrated walk-through of your unit plan, explaining why you made the decisions you did, based on brain-based learning principles and learning theory.

Submit your annotated unit plan, or your unit plan along with your narrated walk-through.

Example assignment: You may use the assignment example, linked in the Resources, to give you an idea of what a Proficient or higher rating on the scoring guide would look like.

Course Resources

Using Kaltura [PDF]

Disability Services

Blooming Park: Curriculum Design | Transcript

Assignment 4 Example

u06d1 - Using Problem-Based Learning in Your Setting

Problem-based learning is becoming more common in the school setting. Many science curriculum initiatives, including the Next Generation Science Standards, are focused on problem- and inquiry-based learning opportunities. STEM curriculum allows for students to build meaning through experiences and problem-based learning modules.

Discuss your thoughts and experiences with problem-based learning and design-based learning and planning lessons through a problem-based approach. What strategies did you find helpful? How did you address challenges with this approach?

Response Guidelines

Respond to at least two other learners. Ask questions about the strategies described to help further the conversation, and reflect on how those strategies can be utilized in your educational setting. Offer insight as to how your strategies can help your colleagues in their educational settings.

u06d1 - Learning Components

- Investigate components and applications of design-based learning theory.

u06d2 - Assessing a Design-Based Lesson

Browse the Edutopia Web site to search for examples/ideas of design-based learning theory. Post a link or resource to a design-based lesson, and discuss with your colleagues your thoughts on the lesson and/or how it may be implemented in your setting.

Response Guidelines

Respond to at least two other learners. Ask questions that help further the conversation, and reflect on how that lesson, if possible, can be utilized in your educational setting.

Course Resources

Edutopia

Unit 7 >> Humanism: Teaching the Social-Emotional Brain

Introduction

Humanism is an approach that is grounded in the view that learning is a personal act to fulfill your potential. This paradigm, which is focused on human potential, arrived in the 1960s and is rooted in the notion that people act with intention related to their value system. Additionally, humanists believe in educating the whole person. Areas of interest under this construct are the study of motivation and self.

Brain research supports teaching to the emotional brain. In this unit, you will learn more about the social-emotional brain and be able to draw parallels to the humanist theory.

Learning Activities

u07s1 - Studies

Brain-Based Learning and the Emotional Connection

- Sousa, D. A. (2017). *How the brain learns* (5th ed.). Thousand Oaks, CA: Corwin.
  - Refer back to Chapter 3, "Memory, Retention, and Learning," and pay particular attention to the Guidelines for Teaching the Emotional Brain in the Practitioner's Corner section.

- Edutopia. (2008, February 27). *The heart-brain connection: The neuroscience of social, emotional, and academic learning* [Video]. Retrieved from https://www.edutopia.org/richard-davidson-sel-brain-video. Originally published 2008 Edutopia.org; George Lucas Educational Foundation.

Experiential Learning: Kolb

- Reynolds, C. (2013, December 18). *The 3 minute Kolb* [Video]. Retrieved from https://www.youtube.com/watch?v=ObQ2DheGOKA
- Sprouts. (2015, October 12). *Experiential learning* [Video]. Retrieved from https://www.youtube.com/watch?v=aF63HHVbpQ8
  - This resource is used with permission from Sprouts, which shares videos through the Sprouts YouTube channel. Retrieved from https://www.youtube.com/watch?v=aF63HHVbpQ8
- McLeod, S. (2013). Kolb – learning styles. Retrieved from http://www.simplypsychology.org/learning-kolb.html

Learning Styles

- Tedx Talks. (2016, April 6). *Anita Acai: Misconceptions of learning styles* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=gzFQwFfXVMI
- Tedx Talks. (2015, April 2). *Tesia Marshik: Learning styles and the importance of critical self-reflection* [Video]. Retrieved from https://www.youtube.com/watch?v=855Now8h5Rs&t=599s
  - This link leads you to a section about 10 minutes into the presentation, which is the part most relevant to this unit, but feel free to watch the whole video!

Multiple Intelligences: Gardner

- Learning-Thories.com. (n.d.). Multiple intelligences theory (Gardner). Retrieved from https://www.learning-theories.com/gardners-multiple-intelligences-theory.html
- Edutopia. (n.d.). Multiple intelligences self-assessment. Retrieved from https://www.edutopia.org/multiple-intelligences-assessment. Originally published n.d. Edutopia.org; George Lucas Educational Foundation.
- Edutopia. (2016, July 20). Multiple intelligences: What does the research say? Retrieved from https://www.edutopia.org/multiple-intelligences-research. Originally published 2016 Edutopia.org; George Lucas Educational Foundation.
- TEDx Talks. (2015, December 10). *Howard Gardner: Beyond wit and grit: Rethinking the keys to success* [Video]. Retrieved from https://www.youtube.com/watch?v=IfzrN2yMBaQ

Grit: Duckworth, Mathews, Peterson

Use the following resources to examine the role of "grit" in teaching and learning.

- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, 92*(6), 1087–1101.
- Duckworth, A. (n.d.). Grit scale. Retrieved from http://angeladuckworth.com/grit-scale/
- Tedx Talks. (2009, November 12). *Angela Lee Duckworth: True grit: Can perseverance be taught?* [Video]. Retrieved from https://www.youtube.com/watch?v=qaeFnxSfSC4

Intrinsic Motivation: Malone

- Learning-Theories.com. (n.d.). Intrinsically motivating instruction (Malone). Retrieved from https://www.learning-theories.com/intrinsically-motivating-instruction-malone.html

Hierarchy of Needs: Maslow

- Sprouts. (2017, January 5). *Maslow's hierarchy of needs* [Video]. Retrieved from https://www.youtube.com/watch?v=O-4ithG_07Q
  - This resource is used with permission from Sprouts, which shares videos through the Sprouts YouTube channel. Retrieved from https://www.youtube.com/watch?v=O-4ithG_07Q
- McCleod, S. (2016). Maslow's hierarchy of needs. Retrieved from http://www.simplypsychology.org/maslow.html

u07s1 - Learning Components

- Research applications of humanist theories in current teaching environments.
- Investigate humanist learning theories infused in brain-based applications supporting the social, emotional brain.

u07s2 - Assignment Preparation

In Unit 8 you will submit your Brain-Based Design assignment. Read the assignment instructions, consider which option you will choose for the assignment, and read the scoring guide linked from the assignment in Unit 8. If you choose Option 1, begin your lesson plan and assessment design, and plan for the implementation next week. If you choose Option 2, begin conceptualizing your ideal school designed with brain-based principles at the center.

Kaltura Media Setup

One of your options for your assignment involves using Kaltura to create and upload a recording. If you will be choosing that option, complete the following:

- If you have not already done so, set up and test your microphone and webcam, using the installation instructions provided by the manufacturer.
- Practice using the microphone and webcam to ensure the audio and visual quality is sufficient.
- Refer to the Using Kaltura [PDF] tutorial for directions on recording and/or uploading your presentation in the courseroom.

Note: If you require the use of assistive technology or alternative communication methods to participate in this activity, please contact Disability Services to request accommodations.

u07d1 - Debunking Learning Styles

Applying your knowledge of the readings and resources, what are your thoughts on learning profiles/styles? There is research that suggests that preferred learning styles do not attribute to higher rates of learning and retention; rather, brain-based multisensory activities that promote student engagement do.

Review the *Anita Acai: Misconceptions of Learning Styles* and *Tesia Marshik: Learning Styles and the Importance of Critical Self-Reflection* videos on learning styles from TEDx, and discuss your thoughts on the myth-busting and debunking of some commonly held thoughts in education that takes place in the videos.

Response Guidelines

Respond to at least two other learners. Reflect on how the perspectives and experiences discussed align or contrast with your own. Offer insight to your opinion using your own experiences in your educational setting.

Course Resources
Anita Acai: Misconceptions of Learning Styles
Tesia Marshik: Learning Styles and the Importance of Critical Self-Reflection

u07d1 - Learning Components

- Critically assess commonly held views on learning profiles and learning styles and their impact on learning.

u07d2 - Examining Humanist Theories in Action

Pick one of the humanist theories (for example, EQ, experiential learning, grit, multiple intelligences, et cetera) we learned about in this unit, and research a classroom-based application of the model. Share a link with your colleagues in the discussion to an article, a video, a unit, a lesson, or some application of the approach.

Response Guidelines

Examine at least two examples provided and comment on what you find most interesting about the examples and if there are any potential takeaways you might apply to your own setting.

u07d2 - Learning Components

- Research applications of humanist theories in current teaching environments.

Unit 8 >> Identity Theories

Introduction

According to Schneider:

> Identity theory is a family of views on the relationship between mind and body. Identity theories hold that at least some types (or kinds, or classes) of mental states are, as a matter of contingent fact, literally identical with some types (or kinds or classes) of brain states. (n.d., para. 1)

There are several theories that are varied applications of this paradigm. In this unit, you will apply identity theory concepts with the brain research on self-theories. Most commonly applied in current educational practices is the concept of fixed versus growth mindset.

Reference

Schneider, S. (n.d.). Identity theory. *Internet Encyclopedia of Philosophy*. Retrieved from http://www.iep.utm.edu/identity/

Learning Activities

u08s1 - Studies

Developmental Theory

- Learning-Theories.com. (n.d.). Erikson's stages of development. Retrieved from https://www.learning-theories.com/eriksons-stages-of-development.htm

Dweck – Mindset Theory

- Learning-Theories.com. (n.d.). Self-theories (Dweck). Retrieved from https://www.learning-theories.com/self-theories-dweck.html
- Learning-Theories.com. (n.d.). Mindset theory – fixed vs. growth mindset (Dweck). Retrieved from https://www.learning-theories.com/mindset-theory-fixed-vs-growth-mindset-dweck.html
- Wilson, D., & Conyers, M. (2017, January 18). Helping struggling students build a growth mindset. Retrieved from https://www.edutopia.org/article/helping-struggling-students-build-growth-mindset-donna-wilson-marcus-conyers. Originally published 2017 Edutopia.org; George Lucas Educational Foundation.
- Stanford. (2015, November 3). *Carol Dweck: Teaching a growth mindset* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=isHM1rEd3GE
- Sprouts. (2016, April 15). *Growth mindset vs. fixed mindset* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=KUWn_TJTrnU
  - This resource is used with permission from Sprouts, which shares videos through the Sprouts YouTube channel. Retrieved from https://www.youtube.com/watch?v=KUWn_TJTrnU

Self-Perception Theory and Social Identity Theory

- Learning-Thories.com. (n.d.). Self-perception theory (Bem). Retrieved from https://www.learning-theories.com/self-perception-theory-bem.html
- Learning-Thories.com. (n.d.). Social identity theory (Tajfel, Turner). Retrieved from https://www.learning-theories.com/social-identity-theory-tajfel-turner.html
- McLeod, S. (2008). Social identity theory. Retrieved from http://www.simplypsychology.org/social-identity-theory.html

Impact of Learning Environment

- Uncapher, M. (2016, October 14). The science of effective learning spaces. Retrieved from https://www.edutopia.org/article/science-of-effective-learning-spaces-melina-uncapher. Originally published 2016 Edutopia.org; George Lucas Educational Foundation.

u08s2 - Optional Activity: Categorizing Brain-Based Concepts and Strategies

To organize your thinking around some key brain-based concepts, click **Categorizing Brain-Based Concepts and Strategies** to complete a media piece that helps you focus on the four key aspects: the learning environment, teaching strategies, assessment, and curriculum.

Course Resources

Categorizing Brain-Based Concepts and Strategies

u08a1 - Brain-Based Design

By successfully completing this assignment, you will demonstrate your proficiency in the following course competency and assignment scoring guide criteria:

- Competency 3: Analyze brain-based learning (BBL) theory and principles and their implications for student learning, teaching, curriculum design, and student assessment.
  - Apply brain-based learning principles in the context of curriculum design.
  - Apply brain-based learning principles in teaching strategies.
  - Apply brain-based learning principles in the context of assessment.

Instructions

For this assignment, you have two choices in which you can apply the concepts of brain-based learning theory. Choose which one you prefer.

Choice 1: Lesson Plan/Assessment/Curriculum Design/Implementation

Apply brain-based learning theory in the classroom. Submit a lesson plan and student assessment as well as the curriculum design you utilized for planning and implementation.

Using Kaltura Media, upload a video or audio reflection about your lesson design and implementation. What specific elements of your lesson plan and lesson delivery reflected brain-based learning? Discuss the implications of brain-based learning on student learning, teaching, curriculum design, and student assessment based on brain-based learning concepts.

Choice 2: Designing an Ideal Educational Setting

Using the brain-based learning methods and research, create an ideal school or other educational setting. Present a 21st century school that is your unique creation without limitations in funding or resources.

- Explain in detail the learning environment (building, resources, furniture, staffing), technology, and curriculum opportunities the students will have and how you will assess learning.
- Back up your decisions with theory and research related to brain-based learning. Discuss the implications of brain-based learning concepts on student learning, teaching, curriculum design, and student assessment.

The format of your submission is up to you. Feel free to use visual representations to help describe in more detail your school setting, written description, or verbal descriptions via Kaltura Media. Your submission can be a written paper covering the key items, a narrated presentation, a verbal description, or any combination you choose.

Example assignment: You may use the assignment example, linked in the Resources, to give you an idea of what a Proficient or higher rating on the scoring guide would look like.

Course Resources

Using Kaltura [PDF]

Disability Services

Assignment 8 Example

u08d1 - Applications of Identity Theory

Describe a current application of identity theory in education. How do you believe this theory has relevance in student learning? Do you believe that students can overcome personal setbacks and dispositions to achieve at high levels?

Response Guidelines

Respond to at least two learners. Use your own beliefs and experiences to offer insight and provide a different perspective for your colleagues.

u08d1 - Learning Components

- Describe current applications of identity theories in education.

u08d2 - Fixed Versus Growth Mindset

What are your thoughts on growth mindset and fixed mindset? How do you feel about "not yet" versus failing? What are your thoughts about the strategies presented in Wilson and Conyer's 2017 article, "Helping Struggling Students Build a Growth Mindset"?

Response Guidelines

Respond to at least two other learners. Ask questions to further the conversation, and compare and contrast your opinions with your colleagues'. Use your own perspective and experience to offer insight.

Course Resources

Helping Struggling Students Build a Growth Mindset

u08d2 - Learning Components

- Reflect on your views regarding growth mindset and fixed mindset and teaching strategies related to these viewpoints.

Unit 9 >> 21st Century Learners, Media and Technology Theories, and Technology Impacts on Learning

Introduction

As we move further into the digital age, we will examine emerging theories and the application of existing theories in the context of 21st century learning. The focus of the 21st century learning initiatives is on collaboration, digital literacy, innovation, technology, work-life skills, readiness, interdisciplinary learning, problem-solving, and ICT (information and communication technologies) (P21 Partnership for 21st Century Learning, n.d.). These skills are necessary for students to experience success in an increasingly digital age.

Reference

P21 Partnership for 21st Century Learning. (n.d.). The 4Cs research series. Retrieved from http://www.p21.org/our-work/4cs-research-series

Learning Activities

u09s1 - Studies

Learning Theories in Relation to Technology

- Wheeler, S. (2015). *Learning with 'e's: Education theory and practice in the digital age.* Carmathen, Whales: Crown House Publishing.
  - Read pages 30–32, the section titled "The Meaning of Pedagogy."
  - Read Chapter 3, "Theories for the Digital Age."

    - Read Chapter 4, "Old Theories, New Context."
- Learning-Theories.com. (n.d.). E-learning theory (Mayer, Sweller, Moreno). Retrieved from https://www.learning-theories.com/e-learning-theory-mayer-sweller-moreno.html

Technology Impacts on Cognition and Learning

Though the following resources are a bit older, they continue to guide thinking about the impact of technology on the learning process.

- Mayer, R. E., & Moreno, R. (1998). A split-attention effect in multimedia learning: Evidence for dual processing systems in working memory. *Journal of Educational Psychology, 90*(2), 312–320.
- Moreno, R., & Mayer, R. E. (1999). Cognitive principles of multimedia learning: The role of modality and contiguity. *Journal of Educational Psychology, 91*(2), 358–368.
- Kalyuga, S., & Liu, T. (2015). Managing cognitive load in technology-based learning environments. *Journal of Educational Technology and Society, 18*(4), 1–8.
- Miller, A. (n.d.). Brain-based learning with technical support [PDF]. Retrieved from http://files.eric.ed.gov/fulltext/ED485052.pdf

Technology to Build 21st Century Skills

As you examine the following resources, think about how integrating technology in your own environment might help build the 21st century skills of your students. The first resource, from P21 Partnership for 21st Century Learning, addresses research-based approaches to embedding the 4 Cs in teaching: communication, collaboration, critical thinking, and creativity. Explore each of the areas related to these key skills.

- P21 Partnership for 21st Century Learning. (n.d.). The 4Cs research series. Retrieved from http://www.p21.org/our-work/4cs-research-series
- Kivunja, C. (2015). Teaching students to learn and to work well with 21st century skills: Unpacking the career and life skills domain of the new learning paradigm. *International Journal of Higher Education, 4(1),* 1–11. Retrieved from http://www.sciedu.ca/journal/index.php/ijhe/article/view/5694
- TEDx Talks. (2013, December 5). *Nathaniel Bott: 21st century learning* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=UI9TiuVHc0A
- Learning-Theories.com. (n.d.). 21st century skills (P21 and others). Retrieved from https://www.learning-theories.com/21st-century-skills-p21-and-others.html

Technology to Solicit Student Input

As you think about potential benefits of technology integrations, consider how technology tools may offer opportunities for efficient and fun ways to solicit student input through activities such as online surveys, in-class clicker or application-based tools, or wikis. How might technology help facilitate the approaches mentioned in the following article, which does not discuss technology as a facilitator of the ideas presented?

- Alber, R. (2014, March 31). Five ways to give your students more voice and choice. Retrieved from https://www.edutopia.org/blog/five-strategies-more-voice-choice-students-rebecca-alber. Originally published 2014 Edutopia.org; George Lucas Educational Foundation.

u09s1 - Learning Components

- Examine educational technology integration in the context of broader 21st century skills.
- Determine how learning theories apply to the context educational technology applications.

u09s2 - Assignment Preparation

In Unit 10 you will submit your Technology Integration to Improve Learning assignment. Read the assignment instructions, consider which option you will choose for the assignment, and read the scoring guide linked from the assignment in Unit 10.

u09d1 - 21st Century Skills: A Fad or Real?

After completing the readings and watching the videos assigned in this unit's studies, what is your perception of 21st century learning? Is it just a "trendy" approach? How do you see 21st century learning in your setting? Do you have set standards and guidelines related to 21st century principles? If so, what are examples of how these are carried out in your setting?

Response Guidelines

Respond to at least two other learners. Ask questions to further the conversation, and reflect on how your colleagues' perceptions may differ with your own. If your perspectives align, share how they are similar. Use your own perspective and experience to offer insight.

u09d1 - Learning Components

- Examine educational technology integration in the context of broader 21st century skills.

u09d2 - Too Much Tech?

There has been much debate on how much is too much when it comes to technology and our students. What are your feelings on this topic? Have we gone too far, or not far enough?

Response Guidelines

Respond to at least two other learners. Reflect on how your colleagues' opinions may differ from your own, or elaborate on how they align. Ask questions to further the conversation. Use your own experiences from your educational setting to offer insight.

u09d2 - Learning Components

- Identify different approaches for evaluating the success of educational technology integration.

Unit 10 ›› Challenges and Successes with Technology-Based Learning Approaches

Introduction

According to Wheeler (2015), "the search is on to discover the best ways that technology can be used to enhance, enrich, and extend learning" (p.5). Yet a divide between traditional teaching pedagogy and the digital world exists in many schools. Technology is very much embedded in the day-to-day lives of our students outside of school. While some schools have embraced this, others have banned cell phone use and blocked social media in schools.

In this unit, we will examine flipped learning and blended learning models. These practices are becoming more common in today's classrooms. You will examine both models as they relate to teaching utilizing technology, examining both positives and negatives to these approaches.

Reference

Wheeler, S. (2015). *Learning with 'e's: Education theory and practice in the digital age.* Carmathen, Whales: Crown House Publishing.

Learning Activities

u10s1 - Studies

Blended Learning

- Lalima, K. L. D. (2017). Blended learning: An innovative approach [PDF]. *Universal Journal of Educational Research, 5*(1), 129–136. Retrieved from http://www.hrpub.org/download/20161230/UJER16-19508256.pdf
- Holland, B. (2017, February 22). Are we innovating, or just digitizing traditional teaching? Retrieved from https://www.edutopia.org/article/are-we-innovating-or-just-digitizing-traditional-teaching-beth-holland. Originally published 2017 Edutopia.org; George Lucas Educational Foundation.
- Itslearning Global. (n.d.). *Blended learning in 2 minutes and 38 seconds* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=Q5txJfv2q0c
- Blended Learning Universe. (n.d.). Blended learning models. Retrieved from http://www.blendedlearning.org/models/#ind

Flipped Classroom

- Schmidt, S. M. P., & Ralph, D. L. (2016). The flipped classroom: A twist on teaching. *Contemporary Issues In Education Research, 9*(1), 1–6.

- Logan, B. (2015). Deep exploration of the flipped classroom before implementing. *Journal of Instructional Pedagogies*, *16*. Retrieved from http://files.eric.ed.gov/fulltext/EJ1106741.pdf
- Sprouts. (2015, September 28). *The flipped classroom model* [Video]. Retrieved from https://www.youtube.com/watch?v=qdKzSq_t8k8
  - This resource is used with permission from Sprouts, which shares videos through the Sprouts YouTube channel. Retrieved fromhttps://www.youtube.com/watch?v=qdKzSq_t8k8
- Bergmann, J. (2014, November 14). Flipped-learning toolkit: Flipping the non-flippable classes. Retrieved from https://www.edutopia.org/blog/flipping-the-non-flippable-classes-jon-bergmann. Originally published 2014 Edutopia.org; George Lucas Educational Foundation.
- PBS NewsHour. (December 11, 2013). *What a "flipped" classroom looks like* [Video] | Transcript. Retrieved from https://www.youtube.com/watch?v=G_p63W_2F_4

More Strategies for 21st Century Learning

- TEDxTalks. (2015, October 13). *Kayla Delzer: Reimagining classrooms: Teachers as learners and students as leaders* [Video]. Retrieved from https://www.youtube.com/watch?v=w6vVXmwYvgs
- TEDx Talks. (2013, March 20). *Grant Lichtman: What 60 schools can tell us about teaching 21st century skills* [Video]. | Transcript. Retrieved from https://www.youtube.com/watch?v=UZEZTyxSl3g
- TEDx Talks. (2014, November 3). *Eric Sheninger: Schools that work for kids* [Video]. Retrieved from https://www.youtube.com/watch?v=mwrLVvORugw

Optional Resources - Obtaining Education Grants

One of your options for your assignment is to write a grant proposal. You are encouraged to think about actually applying for a technology integration grant for your own institution as a further step after this course. You might consider the following resources below as helpful support.

- The Meemic Foundation. (n.d.). Grant opportunities. Retrieved from https://www.meemic.com/the-meemic-foundation/grant-opportunities.aspx
- Pawlicki, D., & James, C. (2014). *The insider's guide to winning education grants.* San Francisco, CA: Jossey-Bass.
  - This resource is available in the Capella library.

u10s1 - Learning Components

- Identify different approaches for evaluating the success of educational technology integration.
- Evaluate applications of flipped and blended classrooms.
- Investigate technology-based learning and the implications for education.

u10s2 - Optional Activity: Exploring and Deciding on Technology Tools for Learning

Keeping Your Focus on Learning, Not the Tech

As you think through potential technology integration in your setting, it is important to consider how potential technologies align to your students' learning needs and how you might assess whether technologies you choose might actually be supporting those goals. In the following media pieces, explore some examples of specific technology tools, their potential applications or benefits, and ways of thinking about measuring success.

- Click **Exploring Technology Tools for Learning**.
- Click **Deciding on Appropriate Technologies for Learning**.

Course Resources
Exploring Technology Tools for Learning
Deciding on Appropriate Technologies for Learning

u10a1 - Technology Integration to Improve Learning

By successfully completing this assignment, you will demonstrate your proficiency in the following course competency and assignment scoring guide criteria:

- Competency 4: Assess how learning with technology affects the learning process.
  - Integrate educational technology into teaching practices or plans for teaching practices.
  - Develop assessment strategies for measuring the success of educational technology integration in supporting student learning.
  - Support technology integration decisions with research and best practices related to how learning with technology affects the learning process.

Instructions

Integrating technology is expected in our 21st century educational settings, yet it is critical that we stop and think about why we are employing these tools, what informs our decisions about technology, and the impact they have on the student learning experience.

Choose one of the options below to complete for this assignment.

Choice 1: Technology Integration With Your Students

In this assignment, you will leverage your knowledge of the learning process to reflect on the design and application of technology in your own teaching environment.

Complete the following components:

- Create a lesson plan that integrates technology, and then teach the lesson.
- Use a student survey or another format for student input that allows the students to reflect upon how the technology impacted their learning. Examples include pre/post assessment before and after the technology-integrated lesson, Twitter voting, et cetera.
- Assess your technology plan and implementation through either a written analysis (2–3 pages) or an audio reflection using Kaltura Media (5–7 minutes). Include the following:
  - Explain how your decisions about technology integration were supported by research and best practices related to how learning with technology affects the learning process.
  - Assess the effectiveness of the technology integration.
  - Reflect on the impact technology had on the learning process.

Submit your lesson plan and your reflection.

Choice 2: Grant Proposal to Integrate Technology

Many teachers now write their own mini grants and obtain funding from internal or external funding sources. In this assignment you are tasked with writing sections of a grant to help you obtain funding for new technology that would assist you in teaching within your own educational setting. Consider a potential educational technology integration (for example, blended learning, 1:1 classrooms/schools, flipped learning, classroom response systems/clickers).

For the sake of this assignment, you will not be writing the budget section of your proposal or listing staff members, et cetera, who would need to be involved in the implementation; however, you would usually need to complete this information and potentially additional information needed by the grantor if you want to submit this for actual funding. We invite you to take this further during or after the course to fully develop your proposal and submit it. We have had learners already implementing their ideas within a few quarters of completing this course!

In your 3–5 page grant proposal, include the following:

- Description of the educational technology
- Potential for increasing student learning, based upon research and best practices
- Indicators of success—how you would measure the success of the technology implementation

Submit your proposal.

Example assignment: You may use the assignment example, linked in the Resources, to give you an idea of what a Proficient or higher rating on the scoring guide would look like.

Course Resources
Using Kaltura [PDF]
Disability Services
Assignment 10 Example

u10d1 - Sharing Your Assignment

Share your Unit 10 assignment with your colleagues in this course by uploading it to this discussion. If you created a video, note that it takes up to three days for Kaltura to provide closed captions for your video, and plan accordingly.

Response Guidelines

Respond to at least one of your colleagues. What did you find most interesting? Where did you find points of connection or interest relevant to your own teaching practice?

u10d2 - Experiences With Technology-Based Instructional Practices

Share best practices and common mistakes in utilizing technology-based instructional models. Discuss your thoughts regarding the pros/cons of flipped and blended classrooms.

Response Guidelines

What lessons can you draw from your colleagues' observations as you think of technology integrations in your own setting? Where might your viewpoints differ regarding pros or cons mentioned?

u10d2 - Learning Components

- Evaluate applications of flipped and blended classrooms.