Syllabus

Course Overview

This is a core course in the Instructional Design for Online Learning (IDOL) specialization and will provide you with detailed knowledge of the theories and principles that form the foundation for the way we design courses to achieve specific learning outcomes.

The origins of how people learn can be traced to the early days of humankind, when learning and survival were so closely intertwined. Over time, and most specifically in the last 150 years, significant energy has been put into understanding how and why people learn and how to improve human performance. Learning can be guided by instruction, or it can happen incidentally and informally through life experiences. Theories have been developed to explain how people learn specific content and how people learn at different developmental stages throughout the life span. Theories have even been developed to generate principles of instruction that guide instructional practices (Merrill, 2002). What is important is that there are many different theories of learning and instruction and that these propositions are not static—they must be considered in terms of the environment in which the learning is to take place.

This course uses a variety of readings, exercises, discussions, and assignments to help you develop an understanding of learning and instructional theories and their application to the design of effective instruction. The required readings for the course provide a solid foundation for your study of learning theories; however, it is strongly recommended that you read as widely as possible beyond the required materials to better understand the different ways that researchers and practitioners have approached learning and instruction. At the end of journal articles, the References section can be a rich source of additional articles to investigate and provide you with a better understanding of the topic. These materials are not required to complete this course; however, they are resources that you should seriously consider adding to your literature database for future reference.

An important component of the course is the creation and maintenance of a personal portfolio consisting of an annotated bibliography on theories of learning and instruction, instructional design plans based on three different theories of learning and instruction, and a summative synthesis of theories of learning and instruction with implication for further research. The items in your personal portfolio will provide you with a record of your learning in this course and serve as a resource for future courses and research.

Reference

Merrill, M. D. (2002). First principles of instruction. *Educational technology research and development, 50*(3), 43–59.

Kaltura

As part of this course, you are required to record a presentation using Kaltura or similar software. 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. Apply research and theory to the practice of instructional design.
2. Develop professional skills and competencies pertaining to instructional design and related fields.
3. Apply research skills to instructional design projects.
4. Communicate effectively, in visual, oral, and written form.

Course Prerequisites

Cannot be fulfilled by transfer.

Syllabus >> Course Materials

Required

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

Integrated Materials

Many of your required books are available via the VitalSource Bookshelf link in the courseroom, located in your Course Tools. Registered learners in a Resource Kit program can access these materials using the courseroom link on the Friday before the course start date. Some materials are available only in hard-copy format or by using an access code. For these materials, you will receive an email with further instructions for access. Visit the Course Materials page on Campus for more information.

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.

Hardware for Recording Required Audio

- External or built-in microphone
- Broadband Internet connection

Course Pack

These required readings are in a digital coursepack on the VitalSource platform, available from the bookstore. At the start of the quarter, your bookstore order confirmation e-mail will provide instructions for either downloading or accessing the readings online.

Moore, K. D. (2015). Getting ready in the classroom. In *Effective instructional strategies: From theory to practice* (4th ed., pp. 2–32). Thousand Oaks, CA: SAGE Publications.

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.

- Antonenko, P. D. (2015). Neuroscience and learning. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 539–541). Thousand Oaks, CA: SAGE Publications.
- Bawane, J. (2015). Competency models and frameworks. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 135–138). Thousand Oaks, CA: SAGE Publications.
- Birdwell, T., & Burton, J. (2015). Behavioral factors in learning, instruction, and technology. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 75–77). Thousand Oaks, CA: SAGE Publications.
- Cevik, V. (2015). Neurologically based learning and instruction. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 536–538). Thousand Oaks, CA: SAGE Publications.
- Driscoll, M. P. (2015). Cognition and human learning. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 106–109). Thousand Oaks, CA: SAGE Publications.
- 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.
- Feldon, D. F., Warren, S., & Rates, C. (2015). Cognitive task analysis. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 118–122). Thousand Oaks, CA: SAGE Publications.
- Gabrieli, J. E. (2016). The promise of educational neuroscience: Comment on Bowers (2016). *Psychological Review, 123*(5), 613–619.
- Heritage, M. (2013). Gathering evidence of student understanding. In J. H. McMillan (Ed.), *SAGE handbook of research on classroom assessment* (pp. 179–195). Thousand Oaks, CA: SAGE Publications.
- Heslin, P. A., Klehe, U.-C., & Keating, L. A. (2017). Self-efficacy. In S. Rogelberg (Ed.), *The SAGE encyclopedia of industrial and organizational psychology* (2nd ed., pp. 1402–1406). Thousand Oaks, CA: SAGE Publications.
- Horvath, J. C. (2014). The neuroscience of PowerPoint. *Mind, Brain, and Education, 8*(3), 137–143.
- Komarraju, M., & Nadler, D. (2013). Self-efficacy and academic achievement: Why do implicit beliefs, goals, and effort regulation matter? *Learning and Individual Differences, 25*, 67–72.
- Lee, J., & Jang, S. (2014). A methodological framework for instructional design model development: Critical dimensions and synthesized procedures. *Educational Technology, Research and Development, 62*(6), 743–765.
- McGee, H. M., & Johnson, D. A. (2015). Performance motivation as the behaviorist views it. *Performance Improvement, 54*(4), 15–21.
- Merriam, S. B., & Bierema, L. L. (2014). *Adult learning: Linking theory and practice.* Jossey-Bass.
- Pershing, J. A. (2016). Looking back to look forward: Pathfinders no. 1: Behaviorism as a beginning. *Performance Improvement, 55*(1), 37–38.
- Pettersson, R., & Avgerinou, M. D. (2016). Information design with teaching and learning in mind. *Journal of Visual Literacy, 35*(4), 253–267.
- Phillips, D. (2014). Behaviorism. In D. C. Phillips (Ed.), *Encyclopedia of educational theory and philosophy* (Vol. 1, pp. 80–83). Thousand Oaks, CA: SAGE Publications.
- Railean, E., Walker, G., Elçi, A., & Jackson, L. (2016). *Handbook of research on applied learning theory and design in modern education.* Hershey, PA: IGI Global.
- Rivers, S. E., Hagelskamp, C., & Brackett, M. A. (2013). Understanding and assessing the social-emotional attributes of classrooms. In J. H. McMillan (Ed.), *SAGE handbook of research on classroom assessment* (pp. 347–366). Thousand Oaks, CA: SAGE Publications.
- Schunk, D. H. (2014). Learning, theories of. In D. C. Phillips (Ed.), *Encyclopedia of educational theory and philosophy* (Vol. 1, pp. 467–470). Thousand Oaks, CA: SAGE Publications.
- Stern, E., Schumacher, R., & Grabner, R. (2014). Neurosciences and learning. In D. C. Phillips (Ed.), *Encyclopedia of educational theory and philosophy* (Vol. 1, pp. 573–575). Thousand Oaks, CA: SAGE Publications.
- Sweller, J. (2015). Cognitive load theory. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 116–117). Thousand Oaks, CA: SAGE Publications.
- Wilson, S. M. (2014). Bruner, Jerome. In D. C. Phillips (Ed.), *Encyclopedia of educational theory and philosophy* (Vol. 1, pp. 92–93). Thousand Oaks, CA: SAGE Publications.

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.

- Harvard Graduate School of Education, Gutman Library. (n.d.). Synthesize – The literature review: A research journey. Retrieved from https://guides.library.harvard.edu/c.php?g=310271&p=2071511
- TED. (n.d.). *3 ways the brain creates meaning* [Video]. Retrieved from https://www.ted.com/talks/tom_wujec_on_3_ways_the_brain_creates_meaning

Suggested

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.
Hardware for Recording Optional Video

1. External or built-in webcam

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.

- U.S. Department of Education. (n.d.). Family Educational Rights and Privacy Act (FERPA) https://www.ed.gov/policy/gen/guid/fpco/ferpa/index.html
- U.S. Department of Health & Human Services. (n.d.). Summary of the HIPAA privacy rule https://www.hhs.gov/hipaa/for-professionals/privacy/laws-regulations/index.html

Unit 1 >> Learning, Instruction, and Knowledge

Introduction

This is a course about learning or performance, about teaching or training, and the theories that inform best practice in each of those two activities. To provide a starting point for this course, it is important that you can clearly differentiate learning theory from instructional theory. In *Learning and Cognition: The Design of the Mind*, Martinez (2010) approached the study of learning theory from the perspective that if we understand the mind's design, "we can more effectively guide its development—development that includes the acquisition of knowledge as well as the ability to think well" (p. 1). Martinez classified learning theories as paradigms. Behaviorism, according to Martinez, is a paradigm "which in its strictest form does not consider the mind or mental processes to be legitimate concepts" (p. 1).

Another approach to the study of learning theory is to classify learning theories by *epistemologic tradition*. Epistemologic tradition is one way to explain how learning occurs. There are three major epistemologic orientations: objectivism, positivism, and interpretivism (Driscoll, 2005, p. 14). The major learning theories discussed in this course fit with these epistemologic traditions. For example, behaviorism fits with the objectivism epistemologic tradition. Cognitivism also fits with the objectivism epistemologic tradition. However, neuroscientists offer new theories that explain how learning and memory operate, but these do not fit neatly into any one epistemologic tradition. So for this course, we will classify learning theories by family, and examine three families of learning theories: the behaviorist family, the cognitivist family, and the neuroscience family of learning theories.

A learning theory then becomes "a set of constructs or factors that link observed changes in performance with what is thought to bring about those changes" (Driscoll, 2005, p. 9). However, "Because a theory is merely a research tool, it cannot be right or wrong; it is either useful or it is not useful. If a theory clarifies the various observations that have been made, and if it generates additional research, the theory is a good one. If it fails in either respect, the researcher is likely to search for a new theory" (Olson & Hergenhahn, 2009, p. 15). This course is therefore designed to examine different learning theories, which are propositions about what causes changes in performance, and the impact those theories will have on our learning, and how we design instruction to guide learning.

This course is also designed to examine different instructional theories. Whereas, "Theories of learning focus on and describe the process of learning" (Driscoll, 2005, p. 23), instructional theories focus on the "deliberate arrangement of events to facilitate a learner's acquisition of some goal" (Driscoll, 2005, p. 23). Gagné's nine events of instruction is an example of an instructional theory. Reigeluth and Carr-Chellman (2009) defined instruction as "anything that is done purposely to facilitate learning. It includes constructivist methods and self-instruction, as well as more traditional views of instruction, such as lecture and direct instruction" (p. 6). David Merrill's (2009) first principles of instruction is an example of "a set of interrelated prescriptive instructional design principles . . . about instruction that have direct relevance for how the instruction is designed to promote learning activities, rather than activities that learners may use on their own while learning" (p. 43).

As you work through this course, you will undertake a range of activities that are designed to expose you to the wealth of information and research about the learning and instruction. For example, some approaches will suggest that we can design instruction independently from the learner in such a way that learning will, or is likely to, result. Other researchers might focus on the individual learner using measures such as motivation or multiple intelligences to inform the way instruction should be conceptualized. The important issue here is that these two examples must not be seen as alternatives but as essential contributors to our understanding of learning and instruction.

As we work together in this course, you are encouraged to debate and challenge the readings and resources where they do not seem to align with your experience or understanding. You have been provided a list of journal articles in the Course Materials section of the Syllabus as a starting place. These

sources represent salient scholarly and peer-reviewed journals that inform the field of instructional design. Pay attention to the names of the journals where you find relevant articles, and use the journal titles to build effective searches.

Reflect on the best answer to the following questions as you work your way through the readings and study activities for this unit:

- Why do we need theories of learning and instruction?
- How are these theories valuable to the instructional designer?

References

Driscoll, M. P. (2005). *Psychology of learning for instruction* (3rd ed.). Boston, MA: Allyn & Bacon.

Martinez, M. E. (2010). *Learning and cognition: The design of the mind*. Boston, MA: Allyn & Bacon.

Merrill, M. D. (2009). First principles of instruction. In C. M. Reigeluth & A. A. Carr-Chellman (Eds.), *Instructional-design theories and models* (Vol. 3, pp. 41–56). New York, NY: Routledge.

Olson, M. H., & Hergenhahn, B. R. (2009). *An introduction to theories of learning*. Upper Saddle River, NJ: Prentice Hall.

Reigeluth, C. M., & Carr-Chellman, A. A. (Eds.). (2009). *Instructional-design theories and models* (Vol. 3). New York, NY: Routledge.

Learning Activities

u01s1 - Studies

Readings

Use your Capella coursepack to read:

- Jarvis, P. (2018). Learning to be a person in society: Learning to be me. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists…in their own words* (2nd ed., pp. 15–28). Abingdon, UK: Routledge.
- Moore, K. D. (2015). Getting ready in the classroom. In *Effective instructional strategies: From theory to practice* (4th ed., pp. 2–32). Thousand Oaks, CA: SAGE Publications.
- Schunk, D. H. (2016). Introduction to the study of learning. In *Learning theories: An educational perspective* (7th ed., pp. 19–21). Indianapolis, IN: Pearson.

Use the Capella library to read:

- Driscoll, M. P. (2015). Cognition and human learning. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 106–109). Thousand Oaks, CA: SAGE Publications.
- Pettersson, R., & Avgerinou, M. D. (2016). Information design with teaching and learning in mind. *Journal of Visual Literacy, 35*(4), 253–267.

Multimedia

Complete the following Capella multimedia presentations:

- One Hundred Years of Learning Theory.
  - View this presentation for an historical perspective of theories of learning and instruction. An understanding of the history of learning theory will allow you to see the evolution of theories in a comprehensive manner.
- IDD Experts.
  - Learn the pronunciation of unique names in instructional design and development. Throughout your program, you will encounter the work of many significant theorists who have had an impact in the field of instructional design. Your credibility as a scholar in the field of instructional design is enhanced when you correctly pronounce the names of these salient contributors. Use this presentation to guide your practice of correct pronunciations.

u01s1 - Learning Components

- Identify the family of theories.
- Define the theoretical or conceptual framework of a study.
- Identify the type of instructional theory guiding the instructional design.
- Identify the type of learning theory used as the conceptual framework in research studies.
- Define instructional strategies preferred in each family of theories studied.

u01s2 - Course Assignments Preparation

To prepare for course assignments:

- Read the assignment descriptions and scoring guides for Units 4, 5, 8, and 10. Each assignment serves as a building block for your understanding of how research and theory are integral partners in designing instruction to meet learner differences. Becoming familiar with the assignments will help guide your work throughout the course.
- Post drafts of your assignments for peer review in designated discussions throughout the course. The more complete your drafts are, the better chance you have of receiving meaningful feedback.
- Access the Campus links provided in the Resources lists throughout the course to help ensure that you select peer-reviewed articles from the Capella library, that your writing meets APA standards, and that you adhere to Capella's academic integrity policies.

u01s3 - A Reflection on How Instructional Design Professionals Use Theory

Optional Activity

You will find proposed reflections in various units of this course. These exercises are designed to help you build the skills you will need to complete the course assignments and your future academic pursues.

After completing this unit's readings, reflect on what you learned and answer these questions:

- How do instructional design professionals use theories of learning and theories of instruction?
- How might teachers or instructors who design their own online courses use theories of learning and theories of instruction to improve their students' learning outcomes?

Support your reflection with relevant cited evidence from the articles in correct APA style and with examples from your own professional or personal experience.

u01s3 - Learning Components

- Identify keywords that yield relevant results.
- Identify the family of theories.
- Define the theoretical or conceptual framework of a study.
- Identify the type of instructional theory guiding the instructional design.
- Identify the type of learning theory used as the conceptual framework in research studies.

u01s4 - Kaltura

In Unit 5, you will be asked to record an audio presentation. Capella makes available Kaltura, software that is easy to use and upload. Refer to Using Kaltura [PDF] for instructions. You may also use similar software as long as your instructor can open and view your final product.

You will want to have an external or built-in microphone (webcam optional) to complete your assignment. You should set up and test your hardware in advance using the installation instructions provided by the manufacturer. If you are unable to access the hardware needed to record the presentation, you may instead submit a PowerPoint presentation with extensive notes—with the permission of your instructor.

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.

Multimedia

Complete the following Capella multimedia presentation to explore how to use Kaltura:

- Kaltura Basics Tutorial.

u01s5 - 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 program may culminate in a capstone course. At that time, you may be required to show evidence of your learning throughout the program by referring to multiple assessments that 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 that 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 [PDF] to ensure you set up your online portfolio correctly. For more information on ePortfolio visit the Campus ePortfolio page.

Privacy Statement

Capella complies with privacy laws designed to protect the privacy of personal information. While you may voluntarily share your own information publicly, you are obligated to protect the personal information of others that may be associated with your academic or professional development. Before sharing information and material in any ePortfolio that is set up to be shared externally to your program at Capella, please consider privacy obligations in relation to protected populations who may be included or referenced in your academic or clinical work. Refer to the Family Educational Rights and Privacy Act (FERPA) or the Health Insurance Portability and Accountability Act (HIPAA) if you have specific questions or concerns about your choices.

u01d1 - Learning and Instructional Theory: Definitions and Differences

Read the Discussion Participation Scoring Guide to learn how the instructor will evaluate your discussion participation throughout this course. This first discussion activity is designed to allow you to get to know the other participants in the course a little better.

Imagine you are going to attend a professional conference that explores theories of learning and instruction. As a pre-conference activity, participants are asked to collaborate on a discussion blog created to start a conversation among the participants. The topic of the blog is: *A conversation about theories of learning and instruction: What is that all about?*

- Referring to the readings or other articles, how would you respond to the question from the blog topic? What are these theories all about?
- How would you explain the difference between learning theory and instructional theory?
- What role has empirical research played in the development of learning theory and instructional theory?
- What are examples of specific theoretical and practical implications of learning theories and instructional theories to the field of instructional design?

Provide a brief introduction about your interest in instructional design and its relevance to your career, as well as an answer to the questions above.

Response Guidelines

Review the posts of other learners and seek clarification for any statements you find unclear. Using the readings or other scholarly sources as references, respond to the posts of at least two other learners by addressing the following:

- How do the other learners' posts align with your current understanding of the differences? Or with your examples of specific theoretical and practical implications of learning and instructional theories to the field of instructional design?
- How credible were their explanations, and what enhanced or detracted from their credibility?

Course Resources

Graduate Discussion Participation Scoring Guide
Capella University Library
ED7624 Library Research Guide
Academic Honesty & APA Style and Formatting
APA Style and Format

u01d1 - Learning Components

- Identify the family of theories.
- Identify the type of instructional theory guiding the instructional design.
- Apply the principles of effective composition.
- Determine the proper application of the rules of grammar and mechanics.
- Determine the proper application of APA formatting requirements and scholarly writing standards.

Unit 2 >> Behavioral Learning and Instruction

Introduction

Do you believe you can measure student learning by observing changes in students' actions and behaviors? Would you institute a system of rewards and punishments in a classroom to elicit specific results? In this unit, you will explore the behaviorism family of theories often used in education and training to modify learner behavior. "Behavioral psychologists view learning as the ability to perform new behaviors; they focus on a stimulus-response approach to learning" (Richey, Klein, & Tracey, 2011, p. 52). Concepts such as stimulus, response, and classical and operant conditioning are important to understand in behaviorism.

E. L. Thorndike (1874–1949), John B. Watson (1878–1958), and B. F. Skinner (1904–1990) are the founding theorists in this family (Bower & Hilgard, 1981). Skinner developed his theory based on earlier work by Ivan Pavlov (1849–1936) (Driscoll, 2005; Martinez, 2010). Behavioral theories of learning have been the cornerstone of many classroom management and skills training approaches and of many parenting practices. In addition to informing practice, theory is the cornerstone of scholar-practitioner research. Without an adequate knowledge of the salient theories that inform and guide practices in their fields, novice researchers are often surprised when asked the following: What is the theoretical framework for your study?

According to Connelly (2014), "A formal theory is well-developed and is useful to predict behavior or outcomes. A theoretical framework or conceptual framework is less formal and typically less developed than a formal theory. Such a framework often is useful when exploratory work is being done to expand the theoretical ideas (p.187)." It is necessary, when reviewing research, to understand the theoretical framework for the study. By reading research studies, a novice researcher acquires sensitivity for recognizing theoretical frameworks, and eventually develops a working knowledge of how to select a theoretical framework for a proposed study. Then when asked, the novice researcher can confidently describe the theoretical framework of a study.

In this unit, you will begin work on your annotated bibliography portfolio which you will submit in Unit 4. Knowing how to annotate scholarly sources is a fundamental research skill that is useful in a variety of ways. As an instructional designer, you are also a researcher of resources and theoretically based principles to guide your design decisions. As a doctoral learner, knowing how to conduct efficient library and keyword searches and summarize the relevant sources that you find will save you hours of effort when it is time to respond to your comprehensive exam and complete an exhaustive review of the literature for your dissertation. A well-constructed annotated bibliography:

- Encourages you to think critically about the content of the works you are using, their place within a field of study, and their relation to your own research and ideas.
- Proves you have read and understand your sources.
- Establishes your work as a valid source and you as a competent researcher.

- Situates your study and topic in a continuing professional conversation.
- Provides a way for others to decide whether a source will be helpful to their research if they read it.
- Could help interested researchers determine whether they are interested in a topic by providing background information and an idea of the kind of work going on in a field. (University of North Carolina at Chapel Hill, Writing Center, n.d.)

Your annotated bibliography portfolio will serve as the ground work for later assignments in this course.

References

Bower, G. H., & Hilgard, E. R. (1981). *Theories of learning*. Englewood Cliffs, NJ: Prentice-Hall.

Connelly, L. M. (2014). Use of theoretical frameworks in research. *Medsurg Nursing, 23*(3), 187–188.

Driscoll, M. P. (2005). *Psychology of learning for instruction* (3rd ed.). Boston, MA: Allyn & Bacon.

Martinez, M. E. (2010). *Learning and cognition: The design of the mind*. Boston, MA: Allyn & Bacon.

Richey, R., Klein, J. D., & Tracey, M. W. (2011). *The instructional design knowledge base: Theory, research, and practice*. New York, NY: Routledge.

University of North Carolina at Chapel Hill, Writing Center. (n.d.). Annotated bibliographies. Retrieved from https://writingcenter.unc.edu/tips-and-tools/annotated-bibliographies/

Learning Activities

u02s1 - Studies

Readings

Use your Capella coursepack to read:

- Harasim, L. (2017). Behaviorist learning theory. In *Learning theory and online technologies* (2nd ed., pp. 32–44). New York, NY: Routledge.

Use the Capella library to read:

- Birdwell, T., & Burton, J. (2015). Behavioral factors in learning, instruction, and technology. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 75–77). Thousand Oaks, CA: SAGE Publications.
- Phillips, D. (2014). Behaviorism. In D. C. Phillips (Ed.), *Encyclopedia of educational theory and philosophy* (Vol. 1, pp. 80–83). Thousand Oaks, CA: SAGE Publications.

Multimedia

Complete the following Capella multimedia presentations:

- One Hundred Years of Learning Theory.
  - View this presentation to gain an historical perspective of theories of learning and instruction. An understanding of the history of learning theory will allow you to see the evolution of theories in a comprehensive manner. In this unit, find where behaviorism and related elements are in the timeline. To fully understand the concept, note what is happening on either side of a specific event on the timeline. By analyzing the timeline critically, you will begin to understand the connection between events and the development of theory.
    - What came before that influenced the development?
    - What came after that reflected that way of thinking?
- IDD Experts.
  - Learn the pronunciation of unique names in instructional design and development. Throughout your program, you will encounter the work of many significant theorists who have had an impact in the field of instructional design. Your credibility as a scholar in the field of instructional design is enhanced when you correctly pronounce the names of these salient contributors. Use this presentation to guide your practice of correct pronunciations.

u02s1 - Learning Components

- Identify the family of theories.
- Define the theoretical or conceptual framework of a study.
- Identify the type of instructional theory guiding the instructional design.
- Identify the type of learning theory used as the conceptual framework in research studies.
- Define instructional strategies preferred in each family of theories studied.

u02s2 - Annotated Bibliography

In Unit 4, you will submit a summative annotated bibliography portfolio consisting of a minimum of nine articles representing three categories of topics. In this unit, focus on conducting a literature search for articles related to behavioral learning theories and theories of instruction offered by Merrill, Gagné, Reigeluth, Bloom, or Keller. Begin writing your summative annotated bibliography for a cumulative submission in the Unit 4 assignment. Refer to the Resources list for assistance with writing the annotated bibliography.

Using the knowledge you gained from assigned readings about behaviorism, develop a list of keywords to begin your research. For example, you might begin with the names of the theorists. Also, examine the References list provided at the end of the articles and chapters for suggestions where you might begin your search.

Locate two scholarly, peer-reviewed articles pertaining to the behavioral family of learning theories, with one of the articles featuring a specific behavioral learning theory *as the theoretical framework for a research study*. Locate a third scholarly, peer-reviewed article pertaining to one theory of instruction offered by Merrill, Gagné, Reigeluth, Bloom, or Keller. The articles must be scholarly and published in a peer-reviewed journal.

- One article must feature a specific **instructional theory**.
- One article must feature a specific behavioral **learning theory**.
- One article must feature a specific behavioral learning theory as the **theoretical or conceptual framework** for a research study.

Write an annotation, or summary, of each article that includes the following elements:

- A citation of the article using current edition APA formatting.
- An introduction of the authors and their qualifications.
- A brief overview of the article.
- The main idea, or thesis, characterizing the intent and purpose of the article.
- Key examples summarizing critical content in the article.
- Other relevant information regarding the article content.

Post a draft of your summative annotations in the peer review discussion in this unit.

Course Resources

Capella University Library

ED7624 Library Research Guide

Academic Honesty & APA Style and Formatting

APA Style and Format

Annotated Bibliography

u02s2 - Learning Components

- Identify keywords that yield relevant results.
- Identify the family of theories.
- Define the theoretical or conceptual framework of a study.
- Identify the type of instructional theory guiding the instructional design.
- Identify the type of learning theory used as the conceptual framework in research studies.
- Define instructional strategies preferred in each family of theories studied.
- Define a summative annotated bibliography.
- List the elements to include in a summative annotated bibliography.

u02d1 - Behavioral Learning

Do changes in observable behavior constitute learning? Using the readings and your library research, prepare a **350-word** referenced and substantiated argument to debate the benefits and pitfalls of behavioral approaches to teaching and learning.

Response Guidelines

Read the posts of other learners and respond to at least one learner. Your responses are expected to be substantive in nature and to reference the assigned readings as well as other theoretical, empirical, or professional literature to support your views and writings.

In your response, do at least one of the following:

- Ask a probing question.
- Offer a suggestion.
- Elaborate on a particular point.
- Provide an alternative perspective.

Remember to provide citations and references for your sources.

Course Resources

Graduate Discussion Participation Scoring Guide

Academic Honesty & APA Style and Formatting

APA Style and Format

u02d1 - Learning Components

- Identify the family of theories.
- Identify the type of instructional theory guiding the instructional design.
- Identify the type of learning theory used as the conceptual framework in research studies.
- Define instructional strategies preferred in each family of theories studied.
- Apply the principles of effective composition.

u02d2 - Annotated Bibliography Peer Review

Share the draft of your summative annotations for articles you located as you completed the second study of this unit. Summative annotations should provide the reader with a solid sense of the content of the article being annotated. Similar to abstracts, however, they are typically more detailed and convey more aspects of the arguments being presented by the author. Provide citations and references for your sources. Please remember, the more complete your draft is, the better chance you have of receiving meaningful feedback. You may pose questions to your peers in areas you are unsure about your work.

Response Guidelines

Read the posts of other learners and respond to at least one learner. For your response, imagine that you and your classmate were to work together building the summative annotations. What additional suggestions would you propose for the positions your classmate took? Provide and cite evidence to show that your position has been substantiated. Make your response substantive and reference the assigned readings and other professional sources to support your views.

Course Resources

Graduate Discussion Participation Scoring Guide

Academic Honesty & APA Style and Formatting

APA Style and Format

u02d2 - Learning Components

- Identify keywords that yield relevant results.
- Identify the family of theories.
- Define the theoretical or conceptual framework of a study.
- Identify the type of learning theory used as the conceptual framework in research studies.

- Define instructional strategies preferred in each family of theories studied.
- Define a summative annotated bibliography.
- List the elements to include in a summative annotated bibliography.

Unit 3 >> Cognitive Learning and Instruction

Introduction

What actually happens when you see a friend's face come into view? When you follow driving directions to an unfamiliar neighborhood? When you read a book? Cognition focuses on the mental activity that is central to knowledge acquisition. Leveraging computer science information processing theory, cognitive theorists and design practitioners speak in terms of *short-term memory, long-term memory,* and *working memory* as they explore the different ways that we receive or perceive information, the way we encode and store that information, and subsequently how we retrieve that information. Among the founding theorists are Richard Atkinson and Richard Shiffrin with their 1968 Atkinson-Shiffrin model of memory having a sequence of three stages for memory (as cited in Smyth, Collins, Morris, & Levy, 1994):

1. Sensory memory (SM).
2. Short-term memory (STM).
3. Long-term memory (LTM).

As you move from simpler levels of cognition (such as recognition and recall) to higher levels of cognition (such as problem solving, critical thinking, inferential reasoning, creative thinking, and ultimately metacognition), the focus turns to the way we derive meaning from what we learn and the extent to which the context of learning events will enhance or detract from achieving learning outcomes. Situated cognition examines knowledge from the perspective of a culture and its people, languages, practices, tools, and artifacts. Finally, the role that emotion, motivation, and volition play in learning is not easily explained by either behaviorism or cognitive information process theory. From your experience, how do these factors impact your own learning?

According to Gredler (2009), among the foundational theorists to research are:

- John Dewey (1859–1952).
- Lev Vgotsky (1896–1934).
- Jean Piaget (1896–1980).
- Jerome Bruner (1915–2016).

Also of interest according to Driscoll (2005) are:

- Robert Gagné (1916–2002) and Gagné's nine events of instruction.
- Benjamin Bloom (1913–1999), famous for the taxonomy of educational objectives.
- John Keller (b. 1938), famous for the ARCS model.

As you continue your research for the Annotated Bibliography Portfolio assignment due in Unit 4, reflect on your own experiences in your workplace and consider how you might apply each of these theories when creating effective instructional designs.

References

Driscoll, M. P. (2005). *Psychology of learning for instruction* (3rd ed.). Boston, MA: Allyn & Bacon.

Gredler, M. E. (2009). *Learning and instruction: Theory into practice* (6th ed.). Upper Saddle River, NJ: Allyn & Bacon.

Smyth, M. M., Collins, A. F., Morris, P. E., & Levy, P. (1994). *Cognition in action* (2nd ed.). Essex, UK: Psychology Press.

Learning Activities

u03s1 - Studies

Readings

Use your Capella coursepack to read:

- Harasim, L. (2017). Cognitivist learning theory. In *Learning theory and online technologies* (2nd ed., pp. 48–56). New York, NY: Routledge.

Use the Capella library to red:

- Wilson, S. M. (2014). Bruner, Jerome. In D. C. Phillips (Ed.), *Encyclopedia of educational theory and philosophy* (Vol. 1, pp. 92–93). Thousand Oaks, CA: SAGE Publications.

- Schunk, D. H. (2014). Learning, theories of. In D. C. Phillips (Ed.), *Encyclopedia of educational theory and philosophy* (Vol. 1, pp. 467–470). Thousand Oaks, CA: SAGE Publications.

Multimedia

Complete the following Capella multimedia presentations:

- One Hundred Years of Learning Theory.
  - View this presentation to gain an historical perspective of theories of learning and instruction. An understanding of the history of learning theory will allow you to see the evolution of theories in a comprehensive manner. In this unit, find where cognitive theorists and related elements are in the timeline. To fully understand the concept, look at what is happening on either side of a specific event on the timeline. By analyzing the timeline critically, you will begin to understand the connection between events and the development of theory.
    - What came before that influenced the development?
    - What came after that reflected that way of thinking?
- IDD Experts.
  - Learn the pronunciation of unique names in instructional design and development. Throughout your program, you will encounter the work of many significant theorists who have had an impact in the field of instructional design. Your credibility as a scholar in the field of instructional design is enhanced when you correctly pronounce the names of these salient contributors. Use this presentation to guide your practice of correct pronunciations.

u03s2 - Annotated Bibliography

In Unit 4, you will submit a summative annotated bibliography portfolio consisting of a minimum of nine articles representing three categories of topics. In this unit, focus on conducting a literature search for articles related to cognitive learning theories and theories of instruction offered by Merrill, Gagné, Reigeluth, Bloom, or Keller. Begin writing your summative annotated bibliography for a cumulative submission in the Unit 4 assignment. Refer to the Resources list for assistance with writing the annotated bibliography.

Using the knowledge you gained from assigned readings about cognitivism, develop a list of keywords to begin your research. For example, you might begin with the names of the theorists. Also, examine the References list provided at the end of the articles and chapters for suggestions where you might begin your search.

Locate two scholarly, peer-reviewed articles pertaining to the cognitive family of learning theories, with one of the articles featuring a specific cognitive learning theory *as the theoretical framework for a research study*. Locate a third scholarly, peer-reviewed article pertaining to one theory of instruction offered by Merrill, Gagné, Reigeluth, Bloom, or Keller. The articles must be scholarly and published in a peer-reviewed journal.

- One article must feature a specific **instructional theory**.
- One article must feature a specific cognitive **learning theory**.
- One article must feature a specific cognitive learning theory as the **theoretical or conceptual framework** for a research study.

Write an annotation, or summary, of each article that includes the following elements:

- A citation of the article using current edition APA formatting.
- An introduction of the authors and their qualifications.
- A brief overview of the article.
- The main idea, or thesis, characterizing the intent and purpose of the article.
- Key examples summarizing critical content in the article.
- Other relevant information regarding the article content.

Post a draft of your summative annotations in the peer review discussion in this unit.

Course Resources

Capella University Library

ED7624 Library Research Guide

Academic Honesty & APA Style and Formatting

APA Style and Format

Annotated Bibliography

u03s2 - Learning Components

- Identify keywords that yield relevant results.
- Identify the family of theories.
- Define the theoretical or conceptual framework of a study.
- Identify the type of instructional theory guiding the instructional design.
- Identify the type of learning theory used as the conceptual framework in research studies.
- Define instructional strategies preferred in each family of theories studied.
- Define a summative annotated bibliography.
- List the elements to include in a summative annotated bibliography.

u03s3 - A Refection on What Makes You Want to Learn

Optional Activity

Using the unit readings as a framework, write a reflective description of how and what motivates you to learn.

- What makes you want to learn?
- Would you be more inclined to participate in this course if you were offered $100 for each posting?
- If you knew you would get an A grade, would your motivation to participate decrease?
- If you were to take a course for pass-fail, how would your motivation to excel change?
- What if you knew that what you learn in this course was essential for passing your comprehensive exam?
- How would that influence your motivation?

u03s3 - Learning Components

- Define the theoretical or conceptual framework of a study.
- Identify the type of instructional theory guiding the instructional design.
- Identify the type of learning theory used as the conceptual framework in research studies.
- Define instructional strategies preferred in each family of theories studied.

u03d1 - Annotated Bibliography Peer Review

Share the draft of your summative annotations for articles you located as you completed the second study of this unit. Summative annotations should provide the reader with a solid sense of the content of the article being annotated. Similar to abstracts, however, they are typically more detailed and convey more aspects of the arguments being presented by the author. Provide citations and references for your sources. Please remember, the more complete your draft is, the better chance you have of receiving meaningful feedback. You may pose questions to your peers in areas you are unsure about your work.

Response Guidelines

Read the posts of other learners and respond to at least one learner. For your response, imagine that you and your classmate were to work together building the summative annotations. What additional suggestions would you propose for the positions your classmate took? Provide and cite evidence to show that your position has been substantiated. Make your response substantive and reference the assigned readings and other professional sources to support your views.

Course Resources

Graduate Discussion Participation Scoring Guide

Academic Honesty & APA Style and Formatting

APA Style and Format

u03d1 - Learning Components

- Identify keywords that yield relevant results.
- Identify the family of theories.
- Define the theoretical or conceptual framework of a study.
- Identify the type of learning theory used as the conceptual framework in research studies.
- Define instructional strategies preferred in each family of theories studied.
- Define a summative annotated bibliography.
- List the elements to include in a summative annotated bibliography.

Unit 4 >> Cognitive Developmental or Neuroscientific Learning and Instruction

Introduction

Is nature or nurture more important to the learning process? Why do we talk about the developmental timeline for infants in terms of months, in children in terms of years, and in adults in terms of decades? Forces such as biological growth and brain maturation combined with developmentally appropriate experiences are required for learning to take place. As you continue your research on cognitive development through the life span, note the works of the following salient theorists (as recommended by Martinez, 2010):

- Jean-Jacques Rousseau (1712–1778).
- Jean Piaget (1896–1980), stages of cognitive development.
- Jerome Bruner (1915–2016), focus on how humans create meaning.
- Lev Vgotsky (1896–1934), zone of proximal development (ZPD).

As educators and instructional designers, when we think about development and maturity across a life span, our thoughts naturally turn to questions about the brain and brain development. From a learning and instruction perspective, if someone asked you how you distinguish between the mind and the brain, how would you respond? What is the connection between the two? In recent years, cognitive psychologists studying neuropsychology and neuroscience have focused on the connections between the regions of the brain and thought processes. As you continue researching articles for the Annotated Bibliography Portfolio assignment due in this unit, think about instructional strategies that would support these theories.

References

Martinez, M. E. (2010). *Learning and cognition: The design of the mind*. Boston, MA: Allyn & Bacon.

Learning Activities

u04s1 - Studies

Readings

Use your Capella coursepack to read:

- Hattie, J. A. T., & Donoghue, G. M. (2018). Optimizing the effectiveness of learning strategies. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists…in their own words* (2nd ed., pp. 97–113). Abingdon, UK: Routledge.

Use the Capella library to read:

- Stern, E., Schumacher, R., & Grabner, R. (2014). Neurosciences and learning. In D. C. Phillips (Ed.), *Encyclopedia of educational theory and philosophy* (Vol. 1, pp. 573–575). Thousand Oaks, CA: SAGE Publications.
- Antonenko, P. D. (2015). Neuroscience and learning. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 539–541). Thousand Oaks, CA: SAGE Publications.
- Cevik, V. (2015). Neurologically based learning and instruction. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 536–538). Thousand Oaks, CA: SAGE Publications.

Use the Internet to watch:

- TED. (n.d.). *3 ways the brain creates meaning* [Video] | Transcript. Retrieved from https://www.ted.com/talks/tom_wujec_on_3_ways_the_brain_creates_meaning
    - Information designer Tom Wujec believes the more we know about the way the brain works, the stronger our collaborations with others. He presents three areas of the brain that help us understand words, images, feelings, and connections, and he explains how the brain visualizes. He asks, "How can we best engage our brains to better understand big ideas?"

Multimedia

Complete the following Capella multimedia presentation:

- One Hundred Years of Learning Theory.
  - View this presentation to gain an historical perspective of theories of learning and instruction. An understanding of the history of learning theory will allow you to see the evolution of theories in a comprehensive manner. In this unit, find where cognitive development, neuroscience, and related elements are in the timeline. To fully understand the concept, look at what is happening on either side of a specific event on the timeline. By analyzing the timeline critically, you will begin to understand the connection between events and the development of theory.
    - What came before that influenced the development?
    - What came after that reflected that way of thinking?
- IDD Experts.
  - Learn the pronunciation of unique names in instructional design and development. Throughout your program, you will encounter the work of many significant theorists who have had an impact in the field of instructional design. Your credibility as a scholar in the field of instructional design is enhanced when you correctly pronounce the names of these salient contributors. Use this presentation to guide your practice of correct pronunciations.

u04s1 - Learning Components

- Identify the family of theories.
- Define the theoretical or conceptual framework of a study.
- Identify the type of instructional theory guiding the instructional design.
- Identify the type of learning theory used as the conceptual framework in research studies.
- Define instructional strategies preferred in each family of theories studied.

u04s2 - Annotated Bibliography

In this unit, you will submit an annotated bibliography portfolio consisting of a minimum of nine articles representing three categories of topics. In this unit, focus on conducting a literature search for articles related to cognitive developmental learning theories or the principles of neuroscience and for articles related to theories of instruction offered by Merrill, Gagné, Reigeluth, Bloom, or Keller. Begin writing your annotated bibliography for a cumulative submission in this unit's assignment. Refer to the Resources list for assistance with writing the annotated bibliography.

Using the knowledge you gained from assigned readings about cognitive development and the principles of neuroscience, develop a list of keywords to begin your research. For example, you might begin with the names of the theorists. Also, examine the References list provided at the end of the articles and chapters for suggestions where you might begin your search.

Locate two scholarly, peer-reviewed articles pertaining to the cognitive developmental family of learning theories or the neuroscientific principles related to learning. One of the articles should feature a specific cognitive developmental learning theory or neuroscientific approach to learning *as the theoretical framework for a research study*. Locate a third scholarly, peer-reviewed article pertaining to one theory of instruction offered by Merrill, Gagné, Reigeluth, Bloom, or Keller. The articles must be scholarly and published in a peer-reviewed journal.

- One article must feature a specific **instructional theory**.
- One article must feature a specific cognitive developmental **learning theory or principles of neuroscience**.
- One article must feature a specific cognitive developmental learning theory or principles of neuroscience as the **theoretical or conceptual framework** for a research study.

Write an annotation, or summary, of each article that includes the following elements:

- A citation of the article using current edition APA formatting.
- An introduction of the authors and their qualifications.
- A brief overview of the article.
- The main idea, or thesis, characterizing the intent and purpose of the article.
- Key examples summarizing critical content in the article.
- Other relevant information regarding the article content.

Read the Annotated Bibliography Portfolio instructions and scoring guide and review all components of the assignment. Consider how to organize your portfolio to reflect the annotated bibliographies you developed in the second study of Units 2, 3, and 4. Familiarizing yourself with the assignment description will help guide your work as you prepare to submit your portfolio. You should also post a draft of your annotated bibliography portfolio in the peer review discussion in this unit.

Access the Campus links provided in the Resources lists throughout the course to help ensure that you select peer-reviewed articles from the Capella library, that your writing meets APA standards, and that you adhere to Capella's academic integrity policies.

Course Resources

Capella University Library

ED7624 Library Research Guide

Academic Honesty & APA Style and Formatting

APA Style and Format

Annotated Bibliography

u04s2 - Learning Components

- Identify keywords that yield relevant results.
- Identify the family of theories.
- Define the theoretical or conceptual framework of a study.
- Identify the type of instructional theory guiding the instructional design.
- Identify the type of learning theory used as the conceptual framework in research studies.
- Define instructional strategies preferred in each family of theories studied.
- Define a summative annotated bibliography.
- List the elements to include in a summative annotated bibliography.

u04s3 - Assignment Preparation

Next week you will submit the Applying Theory to Instructional Design assignment. In that assignment, you will:

- Identify a problem that can be solved with instruction using a case from your professional experience or from the course readings. The problem you select will serve as the basis for the instructional design plans you will create in Units 6, 7, and 8.
- Submit two deliverables, a 12–15 slide PowerPoint presentation and a 2–3 minute audio presentation recorded in either a Kaltura video or a podcast format. If you have not yet tested Kaltura, now it is an excellent time to do so.

The audio presentation must include:

- A brief description of the problem and the learning need it creates.
- A brief description of the characteristics of the target learner that are relevant and appropriate for the learning need that you identify.
- A statement of the learning goal resulting from the learning need.
    - Instructional goals are statements of what the learners will be able to do at the end of the instruction. They should not represent the designer or instructor goal for the learners. Learning goals and outcomes should contain action verbs. The action verbs should be directly observable and measurable. Understand, know, and learn are examples of actions that cannot be directly observed or measured.
- The type of learning that the learning goal represents, such as declarative knowledge, concepts, procedures, principles, problem solving, cognitive strategies, psychomotor skills, and attitudes.
- Three measurable learning objectives that will enable the target learning audience to achieve the learning goal.
    - Learning objectives are statements of what the learners will be able to do at the end of the instruction. They should contain an action verb. The action verb should be directly observable and measurable. Understand, know, and learn are examples of actions that cannot be directly observed or directly measured.

Review the Applying Theory to Instructional Design instructions and scoring guide in Unit 5 to make sure you understand the grading requirements for the assignment.

Multimedia

Complete the following Capella multimedia presentations in preparation for designing and recording your presentation:

- Guidelines for Effective PowerPoint Presentations.
    - Find suggestions on how to convey your ideas well in a slide format.
- Kaltura Basics Tutorial.
    - Explore how to use Kaltura.
- Presenting Yourself.

    - Learn about conducting presentations.
- Guidelines for Public Speaking.
    - Learn about conducting presentations.
- Persuasive Presentations.
    - Learn about effective strategies for creating presentations.

u04s3 - Learning Components

- Identify who the learners are.
- List the learners' characteristics.
- Identify a learning domain.
- Identify action verbs.
- Write learning goals.
- Define complete performance objectives.
- Define a gap that can be filled with instruction.
- Determine an organizational gap.
- Identify parts of performance objectives.
- Identify a task.
- Use text and images to communicate a message.
- Record a presentation that delivers a complete message.
- Apply the principles of effective composition.

u04a1 - Annotated Bibliography Portfolio

Writing annotated bibliographies is a research skill that can be applied to instructional design practices and to research projects. A bibliography is a list of citations to books and articles used for researching a topic. In an annotated bibliography, each citation is followed by a description, known as the annotation. There are two types of annotations: summative and evaluative. The purpose of a summative annotation is to inform the reader of the main arguments, primary points, and the topics covered by the article or book. Annotations can vary in length from one paragraph to a couple of pages. This type of annotation is similar to an abstract in a journal article, but it is more detailed and conveys more about the arguments being presented.

In this assignment, you will develop a summative annotated bibliography. Your completed annotated bibliography will comprise at least nine research articles focused on specific topics that represent each family of learning theories—behavioral, cognitive, and cognitive developmental or neuroscientific—and theories of instruction. Preparation for this assignment is explained in the second study of Units 2, 3, and 4. Refer to the Annotated Bibliography presentation in the Resources list.

Using the knowledge you gained from assigned readings about theories of learning and theories of instruction, develop a list of keywords to begin your research. For example, you might begin with the names of the theorists. There are two other places you can look for guidance. First, examine the references list provided at the end of a book chapter for suggestions of journal names where you might begin your search. Similarly, you can discover related articles to a topic in the references list at the end of a journal article. Both are excellent resources that can help direct you to other possible relevant articles. Refer to the Bibliographic Mining and Cited Reference Searching presentation in the Resources list.

Assignment Requirements

Organize your completed annotated bibliography by categories A, B, and C. The assignment must include:

- **Category A:** At least three articles that feature a specific theory of instruction selected from the five theorists we are studying in this course (Merrill, Gagné, Reigeluth, Bloom, and Keller).
- **Category B:** At least three articles that feature a specific learning theory from **each** of the family of learning theories we are studying in this course (behavioral, Unit 2; cognitive, Unit 3; and cognitive-developmental or neuroscientific, Unit 4).
- **Category C:** At least three articles that feature a research study using a specific learning theory from each family of learning theories we are studying in this course (behavioral, Unit 2; cognitive, Unit 3; and cognitive-developmental or neuroscientific, Unit 4) as the *theoretical or conceptual framework* for the study.

Write an annotation, or summary, of each article that includes the following elements:

- A citation of the article using current edition APA formatting.
- An introduction of the authors and their qualifications.
- A brief overview of the article.
- The main idea, or thesis, characterizing the intent and purpose of the article.
- Key examples summarizing critical content in the article.
- Other relevant information regarding the article content.

Your paper will be evaluated on the following criteria:

- Create a summative annotated bibliography for each of the selected articles.
- Select articles about instructional theories that guide the design of instruction representing each family of theories studied.
- Select articles that represent learning theories from each family of theories.
- Select articles that report a research study using a specific learning theory in each family as the theoretical or conceptual framework for the study.
- Write following APA style for in-text citations and references.
- Write clearly and logically with correct use of spelling and grammar.

Note: Your instructor may also use the Writing Feedback Tool to provide feedback on your writing. In the tool, click on the linked resources for helpful writing information.

Formatting Requirements

To achieve a successful portfolio experience and outcome, you are expected to meet the following requirements:

- **Written communication:** Written communication is free of grammatical, punctuation, and typographical errors that detract from the overall message.
- **APA formatting:** Resources and citations are formatted according to current APA style and formatting.
- **Number of resources:** A minimum of nine resources.
- **Length of paper:** 10–12 pages, typed and double-spaced, excluding the title page.
- **Font and font size:** Times New Roman, 12 point.

Submit your paper in the assignment area.

Portfolio Prompt: You may choose to save this learning activity to your ePortfolio.

Course Resources
Capella University Library
ED7624 Library Research Guide
Capella Writing Center
Academic Honesty & APA Style and Formatting
APA Style and Format
Annotated Bibliography
Bibliographic Mining and Cited Reference Searching
Writing Feedback Tool
ePortfolio

u04d1 - Annotated Bibliography Portfolio Peer Review

Share the draft of your annotated bibliography portfolio that you completed in the second study of this unit. Your summative annotations should provide the reader with a solid sense of the content of the article being annotated. Similar to abstracts, however, they are typically more detailed and convey more aspects of the arguments being presented by the author. Provide citations and references for your sources. Please remember, the more complete your draft is, the better chance you have of receiving meaningful feedback. You may pose questions to your peers in areas you are unsure about your work.

Response Guidelines

Read the posts of other learners and respond to at least one learner. For your response, imagine that you and your classmate were to work together building the annotated bibliography portfolio. What additional suggestions would you propose for the positions your classmate took? Provide and cite evidence to show that your position has been substantiated. Make your response substantive and reference the assigned readings and other professional sources to support your views.

Course Resources
Graduate Discussion Participation Scoring Guide
ED7624 Library Research Guide
Academic Honesty & APA Style and Formatting
APA Style and Format
Annotated Bibliography

u04d1 - Learning Components

- Identify keywords that yield relevant results.
- Identify the family of theories.
- Define the theoretical or conceptual framework of a study.
- Identify the type of instructional theory guiding the instructional design.
- Identify the type of learning theory used as the conceptual framework in research studies.
- Define instructional strategies preferred in each family of theories studied.
- Define a summative annotated bibliography.
- List the elements to include in a summative annotated bibliography.

Unit 5 >> Thinking About Applying Theory to Practice

Introduction

At this point in the course, you have created an annotated bibliography portfolio of scholarly articles related to theories of learning and instruction. In Units 6–8, you will practice applying the theories you have studied to a real-world situation. In preparation for your application of theory to practice, it is important to identify a problem that can be solved with instruction.

You will have the opportunity to select a problem from your own work experience or from the course readings. Another option is to use one of the scenarios provided in the resources or use the scenarios as the basis for creating your own. Once you have identified a problem, you will analyze the problem to determine what is needed to solve the problem. Then you can create a plan for designing instruction to meet the learning needs, using research and theory to inform your design decisions.

In this unit, you will gain practice in presenting and defending a problem that can be solved with instruction. Not all performance problems are can be solved with instruction; however, designers must be able to accurately identify problems and then defend an identified problem if called upon to justify to stakeholders why instruction is needed to solve it. Instructional designers need to be able to effectively communicate visually, in writing, and orally. In this unit, you will have an opportunity to demonstrate effective presentation skills as you introduce the learning need identified for the instructional design plans you will create in Units 6, 7, and 8. For this unit's assignment, you will submit a PowerPoint presentation and an audio recording that focus on a problem that can be solved through instruction.

Learning Activities

u05s1 - Studies

Readings

Use your Capella coursepack to read:

- Reigeluth, C. M., Myers, R. D., & Lee, D. (2017). The learner-centered paradigm of education. In C. M. Reigeluth, B. J. Beatty, & R. D. Myers (Eds), *Instructional-design theories and model* (pp. 5–32). New York, NY: Routledge.

Use the Capella library to read:

- 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.
- Merriam, S. B., & Bierema, L. L. (2014). *Adult learning: Linking theory and practice.* San Francisco, CA: Jossey-Bass.
    - Chapter 2, "Traditional Learning Theories," pages 24–41.
- Railean, E., Walker, G., Elçi, A., & Jackson, L. (2016). *Handbook of research on applied learning theory and design in modern education.* Hershey, PA: IGI Global.
    - Chapter 31, "Adaptable Learning Theory Framework for Technology-Enhanced Learning," pages 632–654.

u05s1 - Learning Components

- Identify who the learners are.
- Identify a learning domain.
- Write learning goals.
- Define complete performance objectives.
- Define a gap that can be filled with instruction.
- Determine an organizational gap.

u05s2 - Assignment Preparation

In this unit's assignment, you will submit a PowerPoint presentation and an audio recording that focus on a problem that can be solved through instruction. The problem that you select will serve as the basis for the instructional design plans that you will be developing in Units 6, 7, and 8 for submission in Unit 8. Therefore, before you select a problem, review the assignment description for the Instructional Design Plan Portfolio in Unit 8. Then prepare for the assignment in this unit by doing the following:

- Reflect on a possible problem to use for the assignment. You can choose a problem from your own professional experience or a case study from the course readings.
- Investigate the method you will use to create an audio recording. One method is to create a recorded presentation using Kaltura; another is to create a podcast. A variety of ways to create a podcast can be found on the Internet. Search for a method that fits your computer equipment.
- Remember, your instructor must be able to play the presentation without having to install any special software.
- Post a draft of your presentation in the peer review discussion in this unit to receive feedback from your peers.

You must have a reliable audio recording device. An external microphone is highly recommended for better quality audio. This task may take longer than expected, so start early to avoid last-minute unnecessary stress.

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
Using Kaltura [PDF]
Persuasive Presentations | Transcript
Presenting Yourself | Transcript
Guidelines for Public Speaking | Transcript
Disability Services
Kaltura Basics Tutorial | Transcript

u05s2 - Learning Components

- Identify who the learners are.

- List the learners' characteristics.
- Identify a learning domain.
- Identify action verbs.
- Write learning goals.
- Define complete performance objectives.
- Define a gap that can be filled with instruction.
- Determine an organizational gap.
- Identify parts of performance objectives.
- Identify a task.
- Use text and images to communicate a message.
- Record a presentation that delivers a complete message.

u05a1 - Applying Theory to Instructional Design

In this assignment, you will:

- Identify a problem that can be solved with instruction using a case from your professional experience or from the course readings. The problem you select will serve as the basis for the instructional design plans you will create in Units 6, 7, and 8.
- Submit two deliverables, a 12–15 slide PowerPoint presentation and a 2–3 minute audio presentation recorded in a Kaltura video or a podcast format. Please remember, your instructor has to be able to play back your presentation.

Assignment Requirements

The audio presentation must include:

- A brief description of the problem and the learning need it creates.
- A brief description of the characteristics of the target learner that are relevant and appropriate for the learning need that you identify.
- A statement of the learning goal resulting from the learning need.
    - Instructional goals are statements of what the learners will be able to do at the end of the instruction. They should not represent the designer or instructor goal for the learners. Learning goals and outcomes should contain action verbs. The action verbs should be directly observable and measurable. Understand, know, and learn are examples of actions that cannot be directly observed or measured.
- The type of learning that the learning goal represents, such as declarative knowledge, concepts, procedures, principles, problem solving, cognitive strategies, psychomotor skills, and attitudes.
- Three measurable learning objectives that will enable the target learning audience to achieve the learning goal.
    - Learning objectives are statements of what the learners will be able to do at the end of the instruction. They should contain an action verb. The action verb should be directly observable and measurable. Understand, know, and learn are examples of actions that cannot be directly observed or directly measured.

For the recorded presentation, please use the bullets or images in the slides as talking points only. Do not read from the slides. You can use the notes space on the slides or a Word document for a detailed script or transcript.

The PowerPoint slides should complement and visually augment your audio presentation. For guidelines on effective presentations, refer back to the multimedia pieces from the preparation studies in Units 4 and 5.

Make appropriate choices on the content of the slides; this is part of communicating effectively. You are required to have a title slide and a reference slide. It is imperative to be mindful of copyright issues when selecting imagery for your presentation. It is not acceptable to download visuals from the Internet without considering their origin or who owns the rights to the visual. It is highly recommended that you use public domain imagery or royalty-free images from stock photography companies. Provide proper credit to all visual sources.

Your presentation will be evaluated on the following criteria:

- Identify a problem that can be solved with instruction.
- Describe the target audience.
- Identify the learning goal and its learning domain.
- Write performance objectives.
- Create a persuasive audiovisual presentation.
- Write following APA style for in-text citations and references.
- Write clearly and logically with correct use of spelling and grammar.

Note: Your instructor may also use the Writing Feedback Tool to provide feedback on your writing. In the tool, click on the linked resources for helpful writing information.

Formatting Requirements

Your submission is expected to meet the following formatting requirements:

- **Length of PowerPoint:** 12–15 slides.
- **Length of audio recording:** 2–3 minutes.
- **Font and font size:** Appropriate style and size of font for legibility and readability.

Portfolio Prompt: You may choose to save this learning activity to your ePortfolio.

Course Resources
Capella University Library
ED7624 Library Research Guide
Academic Honesty & APA Style and Formatting
APA Style and Format
Writing Feedback Tool
ePortfolio

u05d1 - Applying Theory to Instructional Design Peer Review

Share the draft of your presentation on applying theory to instructional design. Keep in mind that a persuasive presentation uses points or images on the slides as a guide for the narrated presentation. Slides should not contain all the text that will be narrated. Provide citations and references for your sources. Please remember, the more complete your draft is, the better chance you have of receiving meaningful feedback. You may pose questions to your peers in areas you are unsure about your work.

Response Guidelines

Read the posts of other learners and respond to at least one learner. Point out the strengths of the draft and offer suggestions for improvement. In your response, consider the following resources:

- Guidelines for Public Speaking.
- Presenting Yourself.
- Persuasive Presentations.

Using the readings and other scholarly sources, review the presentation content, paying special attention to the following areas:

- Can the presented problem be solved by instruction?
- Is the learning goal written as proposed in the guidelines?
- Are the performance objectives complete?

Remember to provide and cite evidence to substantiate your position.

Course Resources
Graduate Discussion Participation Scoring Guide
Using Kaltura [PDF]
Guidelines for Public Speaking | Transcript
Presenting Yourself | Transcript

Persuasive Presentations | Transcript

APA Style and Format

Kaltura Basics Tutorial | Transcript

u05d1 - Learning Components

- Identify who the learners are.
- List the learners' characteristics.
- Identify a learning domain.
- Identify action verbs.
- Write learning goals.
- Define complete performance objectives.
- Define a gap that can be filled with instruction.
- Determine an organizational gap.
- Identify parts of performance objectives.
- Identify a task.
- Use text and images to communicate a message.

Unit 6 >> Behavioral Instructional Design Plan

Introduction

- What does instruction that is designed using a behavioral learning theory look like?
- What elements would you expect to see in an instructional design for which a behavioral learning theory is the theoretical basis?
- What does a task analysis that is conducted to analyze a behavioral learning goal entail?
- How should a learning objective be written to describe a behavioral outcome?
- What kinds of instructional strategies would you expect to see in an instructional design that has a distinct behavioral basis?
- How would behavioral learning be assessed?

In this unit, you will answer these questions by applying a behavioral learning theory to an instructional design plan for meeting the learning need you identified in the Unit 5 assignment by:

- Drawing from the literature you reviewed for the Annotated Bibliography Portfolio assignment submitted in Unit 4.
- Applying a behavioral theory of learning to your instructional design plan in order for you to enhance your theory-into-practice knowledge of potential approaches to designing instruction, thereby adding a tool to your instructional designer's toolkit.

Learning Activities

u06s1 - Studies

Readings

Use your Capella coursepack to read:

- Bates, B. (2016). Behaviourism. In *Learning theories simplified: And how to apply them to teaching* (pp. 23–38). Thousand Oaks, CA: SAGE Publications.

Use the Capella library to read:

- McGee, H. M., & Johnson, D. A. (2015). Performance motivation as the behaviorist views it. *Performance Improvement, 54*(4), 15–21.
- Pershing, J. A. (2016). Looking back to look forward: Pathfinders no. 1: Behaviorism as a beginning. *Performance Improvement, 55*(1), 37–38.
- Bawane, J. (2015). Competency models and frameworks. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 135–138). Thousand Oaks, CA: SAGE Publications.

u06s1 - Learning Components

- Identify theory specific to instructional strategies.
- Determine the applicability of instructional strategies to a learning problem.
- Define relationships between theories and instructional design.

u06s2 - Behavioral Instructional Design Plan Preparation

Review the instructions and scoring guide for the Instructional Design Plan Portfolio assignment to become familiar with the specific assignment requirements related to this study activity. In Unit 8, you will submit an instructional design plan portfolio consisting of one plan per family of theories. In this unit, focus on creating an instructional design plan related to the family of behavioral theories of learning. Begin writing your instructional design plan for a cumulative submission in the Unit 8 assignment.

Use your annotated bibliography portfolio to select credible research studies that provide a theoretical basis for your behavioral instructional design plan. Then use the Bibliographic Mining and Cited Reference Searching presentation in the Resources list to locate additional articles for review and inclusion in your instructional design plan that aligns with a specific behavioral learning theory and one of the instructional theories that you researched at the beginning of this course.

The instructional design plan must include:

- A description of the learning need that you identified in the Unit 5 assignment.
- A description of the target learner characteristics.
- A learning goal statement.
- Three measurable learning objective statements.
- A description of three instructional strategies that support the learning objectives and are aligned with one of the instructional theories that you researched at the beginning of this course.

Post a draft of your plan in the peer review discussion in this unit.

Course Resources

Capella University Library

ED7624 Library Research Guide

Bibliographic Mining and Cited Reference Searching

Academic Honesty & APA Style and Formatting

APA Style and Format

u06s2 - Learning Components

- Identify theory specific to instructional strategies.
- Define learning needs.
- Describe learners' characteristics.
- Determine the applicability of instructional strategies to a learning problem.
- Describe the learning environment.
- Define relationships between theories and instructional design.
- Write instructional goals.
- Write performance objectives.

u06s3 - Using One Source to Find Related Sources

Bibliographic mining and cited reference searching are advanced research techniques that help you look both backward and forward in time to discover how an individual article or book relates to the development of a discipline or concept.

Review the bibliography or reference section in an article related to the behavioral family of theories from your annotated bibliography portfolio. Identify a credible scholarly research article from the list, find the article in the Capella library, and write a summative annotation of this primary source. Explain how the article contributes to the theoretical basis for your specific behavioral instructional design plan. Provide citations and references for the original source and the source you *mined*. Refer to the Bibliographic Mining and Cited Reference Searching presentation in the Resources list for assistance. This activity will help you with the completion of course assignments in Units 8 and 10.

Course Resources

Capella University Library

ED7624 Library Research Guide

Bibliographic Mining and Cited Reference Searching

Academic Honesty & APA Style and Formatting

APA Style and Format

u06s3 - Learning Components

- Identify theory specific to instructional strategies.
- Determine the applicability of instructional strategies to a learning problem.
- Define relationships between theories and instructional design.

u06d1 - Behavioral Evidence of Learning

Consider this scenario: Because of your instructional design knowledge, you have been asked to offer suggestions for helping a friend's teenager learn to manage his time better. You decide to use the opportunity to practice applying behavioral learning theory to designing instruction that will resolve the teenager's time management problem. Reflect on each of the following questions and include your responses in a 350-word post:

- How would a behavioralist approach this learning need?
- What would a behavioralist accept as evidence of learning?
- What instructional theory would a behavioralist include in a learning plan for helping a teenager improve his time management skills?

Support your rationale with evidence from the scholarly, peer-reviewed literature in your annotated bibliography portfolio, cited in correct APA format.

Response Guidelines

Read the posts of other learners and respond to at least one learner. Your responses are expected to be substantive in nature and to reference the assigned readings as well as other theoretical, empirical, or professional literature to support your views and writings.

In your response, do at least one of the following:

- Ask a probing question.
- Offer a suggestion.
- Elaborate on a particular point.
- Provide an alternative perspective.

Remember to provide citations and references for your sources.

Course Resources

Graduate Discussion Participation Scoring Guide

Academic Honesty & APA Style and Formatting

APA Style and Format

u06d1 - Learning Components

- Identify theory specific to instructional strategies.
- Define learning needs.
- Describe learners' characteristics.
- Determine the applicability of instructional strategies to a learning problem.
- Describe the learning environment.
- Define relationships between theories and instructional design.
- Write instructional goals.

- Write performance objectives.

u06d2 - Behavioral Instructional Design Plan Draft

Post a draft of the instructional design plan completed in this unit's second study. The plan should align with a specific behavioral learning theory and one of the instructional theories that you researched at the beginning of this course.

The plan should include:

- A description of the learning need that you identified in the Unit 5 assignment.
- A description of the target learner characteristics.
- A learning goal statement.
- Three measurable learning objective statements.
- A description of three instructional strategies that support the learning objectives and are aligned with one of the instructional theories that you researched at the beginning of this course.

All three instructional design plans—one plan per family of theories—will be due in Unit 8.

Response Guidelines

Review the scoring guide for the Instructional Design Plan Portfolio assignment. Select at least one of your peers' posted drafts to review. Write an in-depth critique supported by scholarly, constructive comments. Ask clarifying questions, offer suggestions for improvement, and point out the strengths of the draft according to the grading criteria. Base your replies on the readings and provide corroboration by including references with your responses.

Course Resources

Graduate Discussion Participation Scoring Guide

u06d2 - Learning Components

- Identify theory specific to instructional strategies.
- Define learning needs.
- Describe learners' characteristics.
- Determine the applicability of instructional strategies to a learning problem.
- Describe the learning environment.
- Define relationships between theories and instructional design.
- Write instructional goals.
- Write performance objectives.

Unit 7 >> Cognitive Instructional Design Plan

Introduction

- What does instruction that is designed using a cognitive learning theory look like?
- What elements would you expect to see in a design for which a cognitive learning theory is the theoretical basis?
- What does a task analysis that is conducted to analyze a cognitive learning goal entail?
- How should a learning objective be written to describe a cognitive outcome?
- What kinds of instructional strategies would you expect to see in an instructional design that has a distinct cognitive basis?
- How would cognitive learning be assessed?

In this unit, you will answer these questions by applying a cognitive learning theory to an instructional design plan for meeting the learning need you identified in the Unit 5 assignment by:

- Drawing from the literature you reviewed for the Annotated Bibliography Portfolio assignment submitted in Unit 4.
- Applying a cognitive theoretical basis to your instructional design plan in order for you to enhance your theory-into-practice knowledge of potential approaches to designing instruction, thereby adding a tool to your instructional designer's toolkit.

Learning Activities

u07s1 - Studies

Readings

Use the Capella library to read:

- Railean, E., Walker, G., Elçi, A., & Jackson, L. (2016). *Handbook of research on applied learning theory and design in modern education.* Hershey, PA: IGI Global.
    - Chapter 6, "Constructivism in Education: Interpretations and Criticisms From Science Education," pages 116–144.
- Sweller, J. (2015). Cognitive load theory. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 116–117). Thousand Oaks, CA: SAGE Publications.
- Feldon, D. F., Warren, S., & Rates, C. (2015). Cognitive task analysis. In J. M. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 118–122). Thousand Oaks, CA: SAGE Publications.

u07s1 - Learning Components

- Identify theory specific to instructional strategies.
- Determine the applicability of instructional strategies to a learning problem.
- Define relationships between theories and instructional design.

u07s2 - Cognitive Instructional Design Plan Preparation

Review the instructions and scoring guide for the Instructional Design Plan Portfolio assignment to become familiar with the specific assignment requirements related to this study activity. In Unit 8, you will submit an instructional design plan portfolio consisting of one plan per family of theories. In this unit, focus on creating an instructional design plan related to cognitive theories. Begin writing your instructional design plan for a cumulative submission in the Unit 8 assignment.

Use your annotated bibliography portfolio to select credible research studies that provide a theoretical basis for your cognitive instructional design plan. Then use the Bibliographic Mining and Cited Reference Searching presentation to locate additional articles for review and inclusion in your instructional design plan that aligns with a specific cognitive learning theory and one of the instructional theories that you researched at the beginning of this course.

The instructional design plan must include:

- A description of the learning need that you identified in the Unit 5 assignment.
- A description of the target learner characteristics.
- A learning goal statement.
- Three measurable learning objective statements.
- A description of three instructional strategies that support the learning objectives and are aligned with one of the instructional theories that you researched at the beginning of this course.

Post a draft of your plan in the peer review discussion in this unit.

Course Resources
Capella University Library
ED7624 Library Research Guide
Bibliographic Mining and Cited Reference Searching
Academic Honesty & APA Style and Formatting
APA Style and Format

u07s2 - Learning Components

- Identify theory specific to instructional strategies.
- Define learning needs.
- Describe learners' characteristics.
- Determine the applicability of instructional strategies to a learning problem.

- Describe the learning environment.
- Define relationships between theories and instructional design.
- Write instructional goals.
- Write performance objectives.

u07s3 - Using One Source to Find Related Sources

Review the bibliography or reference section in an article related to the cognitive family of theories from your annotated bibliography portfolio. Identify a credible scholarly research article from the list, find the article in the Capella library, and write a summative annotation of this primary source. Explain how the article contributes to the theoretical basis for your specific cognitive instructional design plan. Provide citations and references for the original source and the source you mined. Refer to the Bibliographic Mining and Cited Reference Searching presentation in the Resources list for assistance. This activity will help you with the completion of course assignments in Units 8 and 10.

Course Resources

Capella University Library

ED7624 Library Research Guide

Bibliographic Mining and Cited Reference Searching

Academic Honesty & APA Style and Formatting

APA Style and Format

u07s3 - Learning Components

- Identify theory specific to instructional strategies.
- Determine the applicability of instructional strategies to a learning problem.
- Define relationships between theories and instructional design.

u07d1 - Cognitive Evidence of Learning

In an effort to gain further insights and practice designing instruction from various theoretical approaches, you decide to use the opportunity to practice applying cognitive learning theory to designing instruction that will resolve the time management problem of your friend's teenage son.

Reflect on each of the following questions and include your responses in a 350-word post:

- How would a cognitive learning theorist or design practitioner approach this learning need?
- What would a cognitive learning theorist or design practitioner accept as evidence of learning?
- What instructional theory would a cognitive learning theorist or design practitioner use to help a teenager improve his time management skills?

Support your rationale with evidence from the scholarly, peer-reviewed literature in your annotated bibliography portfolio, cited in correct APA format.

Response Guidelines

Read the posts of other learners and respond to at least one learner. Your responses are expected to be substantive in nature and to reference the assigned readings as well as other theoretical, empirical, or professional literature to support your views and writings.

In your response, do at least one of the following:

- Ask a probing question.
- Offer a suggestion.
- Elaborate on a particular point.
- Provide an alternative perspective.

Remember to provide citations and references for your sources.

Course Resources

Graduate Discussion Participation Scoring Guide

Academic Honesty & APA Style and Formatting

APA Style and Format

u07d1 - Learning Components

- Identify theory specific to instructional strategies.
- Define learning needs.
- Determine the applicability of instructional strategies to a learning problem.
- Define relationships between theories and instructional design.

u07d2 - Cognitive Instructional Design Plan Draft

Post a draft of the instructional design plan completed in this unit's second study. The plan should align with a specific cognitive learning theory and one of the instructional theories that you researched at the beginning of this course.

The plan should include:

- A description of the learning need that you identified in the Unit 5 assignment.
- A description of the target learner characteristics.
- A learning goal statement.
- Three measurable learning objective statements.
- A description of three instructional strategies that support the learning objectives and are aligned with one of the instructional theories that you researched at the beginning of this course.

All three instructional design plans—one plan per family of theories—will be due in Unit 8.

Response Guidelines

Review the scoring guide for the Instructional Design Plan Portfolio assignment. Select at least one of your peers' posted drafts to review. Write an in-depth critique supported by scholarly, constructive comments. Ask clarifying questions, offer suggestions for improvement, and point out the strengths of the draft according to the grading criteria. Base your replies on the readings and provide corroboration by including references with your responses.

Course Resources

Graduate Discussion Participation Scoring Guide

u07d2 - Learning Components

- Identify theory specific to instructional strategies.
- Define learning needs.
- Describe learners' characteristics.
- Determine the applicability of instructional strategies to a learning problem.
- Describe the learning environment.
- Define relationships between theories and instructional design.
- Write instructional goals.
- Write performance objectives.

Unit 8 >> Cognitive Developmental or Neuroscientific Instructional Design Plan

Introduction

- What does instruction that is designed using a cognitive developmental or neuroscientific learning theory look like?
- What elements would you expect to see in a design for which a cognitive developmental or neuroscientific learning theory is the theoretical basis?
- What does a task analysis that is conducted to analyze a cognitive learning goal entail?
- How should a learning objective be written to describe a cognitive outcome?

- What kinds of instructional strategies would you expect to see in an instructional design that has a distinct cognitive developmental or neuroscientific basis?
- How would cognitive developmental or neuroscientific learning be assessed?

In this unit, you will answer these questions by applying a cognitive developmental or neuroscientific learning theory to an instructional design plan for meeting the learning need you identified in the Unit 5 assignment by:

- Drawing from the literature you reviewed for the Annotated Bibliography Portfolio assignment submitted in Unit 4.
- Applying a cognitive developmental or neuroscientific theoretical basis to your instructional design plan in order for you to enhance your theory-into-practice knowledge of potential approaches to designing instruction, thereby adding a tool to your instructional designer's toolkit.

Learning Activities

u08s1 - Studies

Readings

Use the Capella library to read:

- Merriam, S. B., & Bierema, L. L. (2014). *Adult learning: Linking theory and practice.* San Francisco, CA: Jossey-Bass.
  - Pages 168–182 of Chapter 9, "Brain and Cognitive Functioning."
- Horvath, J. C. (2014). The neuroscience of PowerPoint. *Mind, Brain, and Education, 8*(3), 137–143.
- Gabrieli, J. E. (2016). The promise of educational neuroscience: Comment on Bowers (2016). *Psychological Review, 123*(5), 613–619.

u08s2 - Cognitive Development-Neuroscience Instructional Design Plan

Review the Instructional Design Plan Portfolio assignment and scoring guide in this unit to become familiar with the specific assignment requirements related to this study activity. In this unit, you will submit an instructional design plan portfolio consisting of one plan per family of theories. In this study activity, focus on creating an instructional design plan related to either cognitive developmental or neuroscientific theory. Begin writing your instructional design plan for a cumulative submission in this unit.

Use your annotated bibliography portfolio to select credible research studies that provide a theoretical basis for your cognitive developmental or neuroscientific instructional design plan. Then use the Bibliographic Mining and Cited Reference Searching presentation to locate additional articles for review and inclusion in your instructional design plan that aligns with a specific cognitive developmental or neuroscientific learning theory and one of the instructional theories that you researched at the beginning of this course.

The instructional design plan must include:

- A description of the learning need that you identified in the Unit 5 assignment.
- A description of the target learner characteristics.
- A learning goal statement.
- Three measurable learning objective statements.
- A description of three instructional strategies that support the learning objectives and are aligned with one of the instructional theories that you researched at the beginning of this course.

Post a draft of your plan in the peer review discussion in this unit.

Course Resources
Capella University Library
ED7624 Library Research Guide
Bibliographic Mining and Cited Reference Searching
Academic Honesty & APA Style and Formatting

APA Style and Format

u08s3 - Using One Source to Find Related Sources

Review the bibliography or reference section in an article related to the cognitive developmental or neuroscientific family of theories from your annotated bibliography portfolio. Identify a credible scholarly research article from the list, find the article in the Capella library, and post a summative annotation of this primary source. Explain how the article contributes to the theoretical basis for your specific cognitive developmental or neuroscientific instructional design plan. Provide citations and references for the original source and the source you mined. Refer to the Bibliographic Mining and Cited Reference Searching presentation in the Resources list for assistance. This activity will help you with the completion of course assignments in this unit and in Unit 10.

Course Resources

Capella University Library

ED7624 Library Research Guide

Bibliographic Mining and Cited Reference Searching

Academic Honesty & APA Style and Formatting

APA Style and Format

u08s3 - Learning Components

- Identify theory specific to instructional strategies.
- Identify studies on instructional theories.
- Determine the applicability of instructional strategies to a learning problem.
- Identify studies on learning theories.
- Define relationships between theories and instructional design.
- Identify the theory that is the focus of a scholarly source.
- Identify related research opportunities.

u08s4 - Assignment Preparation

Read the Instructional Design Plan Portfolio instructions and scoring guide and review all components of the assignment. Consider how to organize your portfolio to reflect the instructional design plans developed in the second study of Units 6, 7, and 8. Familiarizing yourself with the assignment description will help guide your work as you prepare to submit your portfolio in this unit. You should also post a draft of your portfolio in the peer review discussion in this unit to receive feedback from your peers.

Access the Campus links provided in the Resources lists throughout the course to help ensure that you select peer-reviewed articles from the Capella library, that your writing meets APA standards, and that you adhere to Capella's academic integrity policies.

u08a1 - Instructional Design Plan Portfolio

In this assignment, you will create an Instructional Design Plan Portfolio representing each family of theories: behavioral, cognitive, and cognitive developmental or neuroscience. You will build this assignment across Units 6, 7, and 8 through study activities and peer review discussions. The final portfolio will include three **different** instructional design plans, each one created to address the same learning need you identified in the Unit 5 assignment.

Although an instructional design plan contains elements that you would find in a lesson plan or training plan, **you are not creating lesson plans or training plans.** For example, both a lesson or training plan and the instructional design plans that you will create contain an instructional goal, learning objectives, and instructional strategies. However, unlike lesson or training plans, your instructional design plans will not contain a detailed step-by-step description of how to deliver the lesson or training content to achieve the learning objectives. This type of description is usually intended for the teacher or trainer to guide the lesson or training implementation. A lesson or training plan also focuses on what the teacher or trainer will direct the learners to do during the lesson.

The instructional design plans you create should include an instructional goal, learning objectives with the learning domain (such as affective, cognitive, or psychomotor) clearly evident from how the objective statement is phrased, and instructional strategies that will be used to assist learners in mastering the learning objectives. Your instructional design plans should also include a description of the targeted learner characteristics, a description of the learning environment, and a strategy for measuring successful mastery of the learning objectives.

For the portfolio submission in this unit's assignment, you will include a summary that compares and contrasts how the different learning theories informed your design decisions and how well each theory-based plan addresses the instructional problem.

Instructional Design Plans

Be aware that each instructional design plan will require you to create something that is likely new and challenging. For this reason alone, give yourself plenty of time to read, process, and prepare before you design each instructional design plan for a learning need that identifies both the theoretical basis for the design and the instructional strategies that will be used to help the targeted learning audience accomplish the instructional goal and the learning objectives. Each Instructional Design Plan is based solely on one particular learning theory from each family of learning theories.

In the professional field, an instructional designer has the freedom to create a design that best matches learners' needs and situation. Frequently, instructional designers selectively mix and match a variety of learning theories. For this assignment, since the goal is the application of theories from each of the family theories we have explored in this course, you will focus each instructional plan in one chosen theory from each family of theories.

- **Unit 6, second study – Behavioral Instructional Design Plan:** Use one *behavioral learning theory* to inform your design decisions.
- **Unit 7, second study – Cognitive Instructional Design Plan:** Use one *cognitive learning theory* to inform your design decisions.
- **Unit 8, second study – Cognitive Developmental or Neuroscientific Instructional Design Plan:** Choose only *one cognitive developmental* **or** *one neuroscientific learning theory* to inform your design decisions.

You must use the same target audience and learning need for each instructional design plan; what will change is the focus of your instructional elements based on different theories of learning, such as behavioral, cognitive, and cognitive developmental or neuroscientific.

Why are the assignments designed this way in this course? In order to see the advantages and limitations of applying a specific learning theory to an instructional design solution, one must **focus on one theory at a time** without mixing and matching. Thus, when you apply what you learn in this course in the field of instructional design, you will be more knowledgeable about creating robust instruction based on any of the theories we have discussed. More importantly, you will be capable of appropriately mixing and matching theories to create effective learning solutions and will be able to justify your choices.

Assignment Requirements

Organize your completed Instructional Design Plan Portfolio by family of learning theories. Even though you have repeated the learning need, learners' characteristics, the instructional goal, and learning objectives in each instructional design plan in previous units, for this assignment you will describe these elements just once.

The assignment must include:

- A title page.
- An introduction to the portfolio.
- A description of the learning need that you identified in the Unit 5 assignment.
- A description of the target learner characteristics.
- A description of the learning environment.
- An instructional goal statement and its domain.
- Three measurable learning objective statements.
- For each family of the learning theories:
    - A description of three instructional strategies that support the learning objectives,
    - The alignment of the chosen instructional strategies with one of the instructional theories that you researched at the beginning of this course.
    - The strategy to measure successful mastery of the learning objectives.
- A summary with support from scholarly sources that compares and contrasts how the different learning theories inform design decisions for the learning need you identified in the Unit 5 assignment.
- A References section for all sources cited in the portfolio.

Your assignment will be evaluated on the following criteria:

- Address all aspects that form the basis for the instructional design plans, including the learning needs, learners, learning environment, instructional goal, and performance objectives.
- Select instructional strategies from learning theories for applicability to the target learning audience's characteristics.
- Create three different theoretically based instructional design plans for meeting a specific learning need within a targeted learning audience.
- Analyze how research and theory inform design decisions.
- Write following APA style for in-text citations and references.
- Write clearly and logically with correct use of spelling and grammar.

Note: Your instructor may also use the Writing Feedback Tool to provide feedback on your writing. In the tool, click on the linked resources for helpful writing information.

Formatting Requirements

To achieve a successful portfolio experience and outcome, you are expected to meet the following requirements.

Each instructional design plan should meet the following requirements:

- **Length:** 5–7 double-spaced pages of substantive material, excluding the title page and references page. Note: An abstract is not required for the instructional design plans.
- **Format:** Comply with current APA style and format.
- **References:** Include cited references to at least three relevant, scholarly, peer-reviewed journal articles.

The completed instructional design portfolio should meet the following requirements:

- **Number of resources:** A maximum of 12 scholarly resources.
- **Length of paper:** 10–15 pages, typed and double-spaced, excluding the title page and references page.
- **Font and font size:** Times New Roman, 12 point.

Submit your paper in the assignment area.

Portfolio Prompt: You may choose to save this learning activity to your ePortfolio.

Course Resources
Capella University Library
ED7624 Library Research Guide
Bibliographic Mining and Cited Reference Searching
Academic Honesty & APA Style and Formatting
APA Style and Format
Writing Feedback Tool
ePortfolio

u08d1 - Cognitive Developmental-Neuroscientific Evidence of Learning

Your friend is so impressed with your knowledge of how to design instruction from a variety of theoretical approaches that she asks you to include her younger daughter and her husband in your efforts to help the family become better time managers. In an effort to gain further insights and practice designing instruction from various theoretical approaches, you decide to use the opportunity to practice applying cognitive developmental or neuroscientific learning theory, or some combination, to designing instruction that will resolve the time management challenges of your friend's entire family.

Reflect on each of the following questions and include your responses in a 350-word post:

- How would a cognitive developmentalist or neuroscientist approach this learning need?
- What would a cognitive developmentalist or neuroscientist accept as evidence of learning?

- What instructional theory would a cognitive developmentalist or neuroscientist include in a learning plan for helping someone improve his or her time management skills?

Support your rationale with evidence from the scholarly, peer-reviewed literature in your annotated bibliography portfolio, cited in correct APA format.

Response Guidelines

Read the posts of other learners and respond to at least one learner. Your responses are expected to be substantive in nature and to reference the assigned readings as well as other theoretical, empirical, or professional literature to support your views and writings.

In your response, do at least one of the following:

- Ask a probing question.
- Offer a suggestion.
- Elaborate on a particular point.
- Provide an alternative perspective.

Remember to provide citations and references for your sources.

Course Resources

Graduate Discussion Participation Scoring Guide

Academic Honesty & APA Style and Formatting

APA Style and Format

u08d1 - Learning Components

- Identify theory specific to instructional strategies.
- Define learning needs.
- Determine the applicability of instructional strategies to a learning problem.
- Define relationships between theories and instructional design.

u08d2 - Neurosciences Instructional Design Plan Draft

Post a draft of the instructional design plan completed in this unit's second study. The plan should align with a specific cognitive developmental or neuroscientific learning theory and one of the instructional theories that you researched at the beginning of this course.

The plan should include:

- A description of the learning need that you identified in the Unit 5 assignment.
- A description of the target learner characteristics.
- A learning goal statement.
- Three measurable learning objective statements.
- A description of three instructional strategies that support the learning objectives, and are aligned with one of the instructional theories that you researched at the beginning of this course.

All three instructional design plans—one plan per family of theories—will be due in this unit.

Response Guidelines

Review the scoring guide for the Instructional Design Plan Portfolio assignment. Select at least one of your peers' posted drafts to review. Write an in-depth critique supported by scholarly, constructive comments. Ask clarifying questions, offer suggestions for improvement, and point out the strengths of the draft according to the grading criteria. Base your replies on the readings and provide corroboration by including references with your responses.

Course Resources

Graduate Discussion Participation Scoring Guide

u08d2 - Learning Components

- Identify theory specific to instructional strategies.
- Define learning needs.
- Describe learners' characteristics.
- Determine the applicability of instructional strategies to a learning problem.
- Describe the learning environment.
- Define relationships between theories and instructional design.
- Write instructional goals.
- Write performance objectives.

Unit 9 >> Designing for Learner Differences

Introduction

In early instructional design models, in addition to collecting descriptive demographic data about the targeted learning audience, learner analysis meant determining prerequisite skills and knowledge so that instruction could be designed commensurate with the learner's abilities and skills levels. Nowadays, Richey, Klein, and Tracey (2011) remind us that "a wider variety of characteristics are also addressed in the learner analysis phase" (p. 25). To reliably and validly analyze learner characteristics such as beliefs, attitudes, aptitudes, expectancies, values, and mental models, instructional designers typically use measurement instruments to collect the data they need. The data they collect and analyze can inform design decisions involving the selection of instructional strategies. Understanding individual differences among learners can help designers anticipate and plan for variation in the degree of prior knowledge and motivation that may affect the transfer of knowledge and skills. Knowing a novice's mental model of a particular concept at the beginning of instruction can help a designer create the necessary scaffolding to move the learner from novice to expert (Richey et al., 2011).

The science of psychometrics guides the development of the instruments used to assess learners' knowledge, attitude, practices, and personality. Psychometrics is the field primarily concerned with the construction and validation of measurement instruments, such as questionnaires, tests, and personality assessments. A valid measure is one that measures what it is intended to measure. A measure may be reliable without being valid. However, reliability is necessary, but not sufficient, for validity.

At the root of psychometric theory is the assumption that "complex personal traits, including knowledge and cognitive abilities, can be measured in a way that parallels the measurement of physical qualities such as weight and distance" (Martinez, 2010, p. 272). By gaining some knowledge of psychometric theory, the instructional designer can improve his or her ability to select appropriate instruments for assessing individual differences among target learners during the analysis phase and can design more valid and reliable tools for assessing learning outcomes during the evaluation phase. According to the Psychometric Society, "Psychometric models and methods now have a wide range of applicability in various disciplines such as education, industrial and organizational psychology, behavioral genetics, neuropsychology, clinical psychology, medicine, and even chemistry" (Kelderman, 2010).

References

Kelderman, H. (2010). What is psychometrics? Retrieved from https://www.psychometricsociety.org/content/what-psychometrics

Martinez, M. E. (2010). *Learning and cognition: The design of the mind*. Boston, MA: Allyn & Bacon.

Richey, R., Klein, J. D., & Tracey, M. W. (2011). *The instructional design knowledge base: Theory, research, and practice*. New York, NY: Routledge.

Learning Activities

u09s1 - Studies

Readings

Use the Capella library to read:

- Rivers, S. E., Hagelskamp, C., & Brackett, M. A. (2013). Understanding and assessing the social-emotional attributes of classrooms. In J. H. McMillan (Ed.), *SAGE handbook of research on classroom assessment* (pp. 347–366). Thousand Oaks, CA: SAGE Publications.
- Heritage, M. (2013). Gathering evidence of student understanding. In J. H. McMillan (Ed.), *SAGE handbook of research on classroom assessment* (pp. 179–195). Thousand Oaks, CA: SAGE Publications.
- Heslin, P. A., Klehe, U.-C., & Keating, L. A. (2017). Self-efficacy. In S. Rogelberg (Ed.), *The SAGE encyclopedia of industrial and organizational psychology* (2nd ed., pp. 1402–1406). Thousand Oaks, CA: SAGE Publications.
- Komarraju, M., & Nadler, D. (2013). Self-efficacy and academic achievement: Why do implicit beliefs, goals, and effort regulation matter? *Learning and Individual Differences, 25*, 67–72.

Review the following library guide to learn how to find test information in the Capella library and on the Internet:

- Find Published Tests.

Multimedia

Complete the following Capella multimedia presentation:

- Reliability and Validity.

When choosing or evaluating a test or assessment, it is important to consider its reliability and validity. If a test is not reliable or valid, the credibility of that test is questioned. More specifically, without reliability, the test lacks consistency and therefore is not useful. Without validity, you may not be testing what you want to test. In this presentation, you will gain an understanding of the importance of both concepts so that you evaluate and choose reliable and valid tests and assessments for a given situation.

u09s1 - Learning Components

- Identify studies on instructional theories.
- Identify studies on learning theories.
- Identify the theory that is the focus of a scholarly source.
- Define synthesis.
- Identify related research opportunities.
- Define common themes in a collection of articles.

u09d1 - Test Construction

Test construction is almost a science in itself. In *Learning and Cognition: The Design of the Mind*, Martinez (2010) addressed the importance that testing is gaining in the world of education. There is an increasing wealth of information about test development on the Internet.

Review the Find Published Tests library guide, linked in the Resources list, to learn how to find test information in the Capella library and on the Internet. Then complete the following for your initial post:

- Find valid information about testing that is relevant to what you teach, or to what you do professionally, if you do not teach.
- Locate Internet resources that provide information about test instruments and methods that relate to the learners you teach, or to you as a training participant.
- For each resource, provide the full APA-formatted reference, including the URL, and provide a brief description of what the resource offers and how it is relevant to your assessment needs.

Reference

Martinez, M. E. (2010). *Learning and cognition: The design of the mind*. Boston, MA: Allyn & Bacon.

Response Guidelines

Review your peers' responses and begin an in-depth discussion by providing a scholarly, cited response to at least one learner. The goal is to engage in in-depth discussions, so return to this discussion a second time to continue the conversation rather than merely providing a one-post response.

Course Resources
Graduate Discussion Participation Scoring Guide
APA Style and Format
Find Published Tests

u09d1 - Learning Components

- Identify studies on instructional theories.
- Identify studies on learning theories.
- Identify the theory that is the focus of a scholarly source.
- Identify related research opportunities.
- Apply the principles of effective composition.

- Determine the proper application of APA formatting requirements and scholarly writing standards.

Unit 10 >> Implications for Research

Introduction

What have you learned from a course about theories of learning and instruction? Perhaps you have expanded your knowledge of how theory can be applied to instructional design practice. Perhaps you have strengthened your competence in applying theory to practice by generating instructional design plans for meeting a specific learning need from three different theoretical perspectives.

Now it is time to consider how this course may have increased your awareness of, and appreciation for, the role of theory in design and development research and practice. It is time to critically reflect on the call for contributions of new knowledge to guide the development of solutions to new problems. In this unit, you will consider how you could answer the call. What implications for research did you find as you reviewed the literature on learning and instructional theory over the past ten weeks? As part of your assignment in this unit, you will identify two opportunities for further research based on your review of the literature. What is the value of theory to instructional design? You will have the opportunity in this unit's discussion to craft a convincing argument to convey your response to this question.

Learning Activities

u10s1 - Studies

Readings

Use your Capella coursepack to read:

- Novak, G. M., & Beatty, B. J. (2017). Designing just-in-time instruction. In C. M. Reigeluth, B. J. Beatty, & R. D. Myers (Eds), *Instructional-design theories and model* (pp. 415–448). New York, NY: Routledge.

Use the Capella library to read:

- Lee, J., & Jang, S. (2014). A methodological framework for instructional design model development: Critical dimensions and synthesized procedures. *Educational Technology, Research and Development, 62*(6), 743–765.

Use the Internet to complete:

- Harvard Graduate School of Education, Gutman Library. (n.d.). Synthesize – The literature review: A research journey. Retrieved from https://guides.library.harvard.edu/c.php?g=310271&p=2071511

u10s1 - Learning Components

- Identify studies on instructional theories.
- Identify studies on learning theories.
- Identify the theory that is the focus of a scholarly source.
- Define synthesis.
- Identify related research opportunities.
- Define common themes in a collection of articles.

u10s2 - Thinking About Synthesis

You may have heard the word *synthesis* in previous courses or residency sessions. But what exactly is synthesis? What does it mean? How does one synthesize? This study activity presents information regarding the nature of synthesis, the two types of synthesis, and suggested steps to follow in the synthesis process. This information will be useful for the Research Implications for Learning and Instructional Theory assignment in this unit.

To prepare for this unit's assignment, consider the following definitions of synthesis:

- "A synthesis is a written discussion that draws on one or more sources" (Dowell, n.d.).
- "A synthesis reveals a cohesion and sense of continuity. Synthesis indicates a push towards organization, reduction and clarity" (Kolko, 2011, p. xi).
- "The term 'synthesis' means to combine separate elements to form a whole" (Henning, n.d.).

To understand what synthesis is, consider the following analogy. Imagine gathering the authors of the sources from your annotated bibliography portfolio in one room. Everyone is engaged in conversation, commenting on or arguing against each other's ideas. As you stand in the middle of the room, you look for the relationships inferred in the dialogues based on the evidence presented. One possible relationship you discover is the one between the arguments posed by two authors that are in stark contrast to the comments of another author. Another possible relationship could be between one author's supporting evidence and the contrasting evidence presented by another author. When synthesizing in academic writing, the result of your synthesis is an explicit presentation of the inferred relationships between authors' ideas in a logical and organized manner. It reflects the mental work you went through when you sought to understand the diverse range of sources. You are saving the reader all of that effort by presenting a clear, cohesive, and organized presentation that reduces and clarifies the information.

When writing instructors ask learners to synthesize, they are asking them to look for and report on the various connections among sources. **A synthesis paper is organized by topic rather than by source.**

In contrast, when summarizing, all of the authors from the analogy offered for consideration would be in the room, but each person would stand up in turn, deliver their speech, and then sit down with no question-and-answer period between speeches. **A summary paper is organized by source rather than by topic.**

Synthesis writing involves analysis, classification, and division before organization. Jamieson (1999) suggested breaking the synthesis process into three manageable steps:

1. Summarize the main ideas, concepts, and themes.
2. Investigate a variety of ways to organize the information through outlining or another technique.
3. Examine the relationships between the concepts and ideas that emerge from the various ways that you organize the information.

Dowell (n.d.) described two types of synthesis: argument and explanatory. An argument synthesis presents a specific viewpoint logically and is supported with relevant facts from sources. The main premise of an argumentative synthesis centers on debate. A thesis, or idea, is presented and two opposing parties present opposite sides from the same source material.

In an explanatory synthesis, the topic is divided into a variety of components and presented in a clear and organized manner. The components are explained through description to enable the reader to fully understand the topic. The purpose of an explanatory synthesis is not to argue a viewpoint, but to present facts in an objective manner. In this unit's assignment, you will create an explanatory synthesis of 9–12 of the scholarly sources you have reviewed throughout this course.

Take time to consider how you will use the skill of synthesis when you investigate research implications for learning and instructional theory.

References

Dowell, J. A. (n.d.). Introduction to syntheses. Retrieved from https://www.msu.edu/~jdowell/135/Synthesis.html

Henning, T. B. (n.d.). Literature review: Synthesizing multiple sources. Retrieved from https://liberalarts.iupui.edu/uwc/files/documents/Lit_Review_Synthesis.pdf

Jamieson, S. (1999). Resources for writing: Synthesis writing. Retrieved from http://www.users.drew.edu/~sjamieso/Synthesis.htm#key features

Kolko, J. (2011). *Exposing the magic of design: A practitioner's guide to the methods and theory of synthesis*. New York, NY: Oxford University Press.

u10s2 - Learning Components

- Identify studies on instructional theories.
- Identify studies on learning theories.
- Identify the theory that is the focus of a scholarly source.
- Define synthesis.
- Identify related research opportunities.
- Define common themes in a collection of articles.

u10a1 - Research Implications for Learning and Instructional Theory

In this assignment, you will practice a research skill that you can apply to instructional design projects, to future coursework, and to the comprehensive exam and dissertation. You will synthesize the body of knowledge about theories of learning and instruction comprising the readings throughout the course with which you are now familiar.

Begin by reviewing the articles you compiled in your annotated bibliography portfolio. You may want to include other scholarly sources found throughout this course that were particularly helpful in strengthening your understanding of theories of learning and instruction. Select at least nine, but no more than twelve, scholarly sources for your synthesis. As you review the literature to include in your synthesis, think about how you would like to organize it. What

are the topics or themes that come to mind as you review the articles? See the second study in this unit for more information on what synthesis means and how to organize your topics or themes.

Write an explanatory synthesis of 9–12 scholarly sources from those included in your annotated bibliography portfolio or from articles located during bibliography mining practice activities about theories of learning and instruction.

Draw conclusions from your explanatory synthesis to identify two ideas for further research studies using theories of learning or instruction as the theoretical framework for the research. Provide a brief description, no longer than two paragraphs, about each opportunity.

Assignment Requirements

The assignment must include:

- An explanatory synthesis of 9–12 scholarly sources.
- Two opportunities for further research using theories of learning or instruction as the theoretical framework for the research.

Your assignment will be evaluated on the following criteria:

- Analyze scholarly literature about theories of learning and instruction.
- Select studies relevant to theories of learning and instruction to include in an explanatory synthesis.
- Organize a selection of scholarly sources for synthesis.
- Create an explanatory synthesis for a selection of scholarly sources.
- Examine a synthesis of scholarly literature in order to identify opportunities for research.
- Write following APA style for in-text citations and references.
- Write clearly and logically with correct use of spelling and grammar.

Note: Your instructor may also use the Writing Feedback Tool to provide feedback on your writing. In the tool, click on the linked resources for helpful writing information.

Formatting Requirements

To achieve a successful assignment experience and outcome, you are expected to meet the following requirements:

- **Length:** 10–12 double-spaced pages of substantive material, excluding the title page and references page. Note: An abstract is not required for this paper.
- **Format:** Comply with current APA style and format. A synthesis paper is not in the same format as an annotated bibliography. Use the patterns that emerged from your literature review to structure your paper and guide the titles of the headings of your paper.
- **References:** Include cited references to 9–12 scholarly, peer-reviewed sources.
- **Font and font size:** Times New Roman, 12 point.

Submit your paper in the assignment area.

Portfolio Prompt: You may choose to save this learning activity to your ePortfolio.

Course Resources
Capella University Library
ED7624 Library Research Guide
Academic Honesty & APA Style and Formatting
APA Style and Format
Writing Feedback Tool
ePortfolio

u10d1 - Executive Summary

In this discussion, you will write an executive summary of the explanatory synthesis you created in this unit's assignment. An executive summary is a high-level summary that previews the main points of a more in-depth report. It is usually written for nontechnical people who do not have time to read the main report. An executive summary contains just enough information to help a reader become familiar with what is discussed in the full report without having to read the whole thing, and it is often created for decision makers who may not have expertise and familiarity with the subject.

Tips for writing an executive summary include:

- Begin by listing the main points you want to convey in a logical order.
- Write a simple declarative sentence for each of the main points.
- Then add supporting or explanatory sentences as needed to expand on the main points, but do not go into detail.

In general, an executive summary is no more than one-tenth the length of the main report, so you must be concise. Avoid unnecessary technical information and jargon. Remember, you are communicating with someone who is unfamiliar with the field. Be sure to reread your summary slowly and critically, making sure it conveys your purpose, message, and key recommendations. You want readers to be able to skim the summary without missing the main points. Writing an executive summary is very much like writing an abstract—they are similar in structure and intent.

Write and post an executive summary of 300–350 words, double-spaced, that explains the value of learning and instructional theory to the practice of instructional design. Your audience is an individual outside of the instructional design field. Craft a convincing and compelling argument in a logical manner that synthesizes your learning in this course, and support your statements with reference citations.

Response Guidelines

Review the post of one learner and contrast his or her executive summary with your executive summary. Include the answer to these questions in your reply to the learner:

- What changes in perspective of the value of theory to instructional design are reflected in the executive summary?
- After reading the executive summary, what conclusions can you draw about the value of learning and instructional theory to the practice of instructional design?
- What information could he or she have included that would have made the argument more convincing and compelling?

Course Resources

Graduate Discussion Participation Scoring Guide

Academic Honesty & APA Style and Formatting

APA Style and Format

u10d1 - Learning Components

- Identify studies on instructional theories.
- Identify studies on learning theories.
- Identify the theory that is the focus of a scholarly source.
- Define synthesis.
- Identify related research opportunities.
- Define common themes in a collection of articles.
- Apply the principles of effective composition.
- Determine the proper application of APA formatting requirements and scholarly writing standards.