Behaviorism

Cognitivism

Constructivism

Socioculturalism

Connectivism

Ivan Pavlov - Classical Conditioning

B.F. Skinner - Operant Conditioning

Informational Processing Theory

Cognitive Load Theory

Robert Gagne’s 9 Events of Instruction

Bloom’s Taxonomy  
Jean Piaget (Theory of Cognitive Development)

Jerome Bruner (Constructivist Learning Theory)

David A. Kolb (Experiential Learning Theory)

Schema Theory

Vygotsky’s Sociocultural Theory

Leontiev’s Activity Theory

Gibson’s Ecological Approach to Learning

Bandura’s Social Learning Theory

Collaborative Learning

Social Interdependence Theory

Self-Regulated Learning

Self-determination Theory

Maslow’s Hierarchy of Needs

Keller’s ARCS Model

Flow Theory

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Theory name: Behaviorism

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

**Key Theorists**

**Type in the names of the key theorists.**

* Ivan Pavlov (classical conditioning)
* Edward Thorndike (operant conditioning, law of effect)
* John B. Watson (objective, first to use human subjects)
* B.F. Skinner (refined operant conditioning, reinforcement and punishment)

**Fundamental Assumptions**

**Write a brief paragraph or give a bullet list of the fundamental assumptions of this theory.**

* Changes in the environment affect behavior through a stimulus-response
* Learning is defined by changes in the subject’s observable behavior
* Subject forms associations between stimuli and changes behavior based on those associations.
* The role of a teacher is to manipulate the environment to encourage desired behavioral changes.
* Learning results from consequences of behaviors - rewarded behaviors are more likely to be repeated, punished behaviors are less likely to be repeated

**Design Process**

* Learners are presented with a stimulus (they are acted on by the environment)
  + Application: Provide a stimulus, such as a presentation or activity, that introduces the context for learning
* Learners begin to make associations and change their behaviors in response to the stimulus
  + Application: Explain consequences related to desired and undesired behaviors and help learners understand the connection between those behaviors and their consequences
* Behaviors are observed
  + Application: Track behaviors as learners engage with learning materials through practice (e.g., quizzes, activities)
* Learners receive reinforcement or punishments based on their behaviors
  + Application: Give positive reinforcements for correct behaviors (e.g., “nice work!”) and punishments (e.g., “try again, that is not right”) for incorrect behaviors
* The stimulus-response-consequence cycle continues
  + Application: Present material again and have learners continue to practice (repetition), offering immediate feedback to help learners master the desired behavior
* Learning is assessed by observable behaviors
  + Application: Measure performance as learners complete a task or as they demonstrate what they have learned

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Topic**: Completing the Graduation Rates Survey for IPEDS

**Learners**: Administrators at postsecondary institutions

**Learning Objective**:

1. Learners will correctly identify, in a knowledge check, the steps involved in completing the Graduation Rates survey
2. Learners will accurately complete and lock the survey

Steps for Instruction

**1. Presentation of Stimulus**

**Activity**: Provide an overview of the IPEDS graduation survey

* **Preparation**: Prepare a presentation that highlights the importance of IPEDS reporting and gives an overview of the data needed and all key definitions.
* **Instruction**: Begin by emphasizing the need for accurate and timely submission of IPEDS data and the impact it has on the institution’s federal funding and transparency. Introduce the steps of completing the survey process and define important terms that are needed to ensure correct data usage.

**2. Change in Behaviors**

**Activity**: Give examples of what can happen as a result of incomplete or incorrect reporting

* **Preparation**: Prepare the following visuals:
  + A visual depicting the amount of students at the institution receiving federal financial aid
  + A screenshot of the institution’s graduation rates taken from the College Navigator website
* **Instruction**: In relation to the first visual, explain what would happen to all of those students receiving financial aid if IPEDS reporting wasn’t submitted (the institution would be in jeopardy of losing available funds for students. Many students cannot attend without federal financial aid). In relation to the second visual, explain the impact of inaccurate information (misrepresentation of the institution, misclassification/misranking, etc.).

**3. Observation of Behaviors**

**Activity**: Have learners fill out a mock survey

* **Preparation**: Create a mock survey and mock student data
* **Instruction**: Have learners complete the mock survey using the provided data, according to the instructions received in the overview. Observe their behavior in regards to the accuracy of data entry.

**4. Reinforcement and/or Punishment**

**Activity**: Provide immediate feedback

* **Preparation**: Create an automated feedback system where a learner receives feedback on a specific data field before moving on to the next field. The system will provide positive feedback for correct answers and negative feedback for incorrect answers.
* **Instruction**: When a student submits an answer in the mock survey, correct answers are acknowledged with “Correct! Your accuracy is impressive.” Incorrect answers are acknowledged with “Oops! You have submitted inaccurate data.” These messages will encourage learners to continue with accurate entry (reinforcement) or to be more careful so they are not called out for inaccuracies (punishment).

**5. Assessment of Observable Behaviors**

**Activity**: Complete and submit an entire Graduation Rates Survey

* **Preparation**: Prepare a sample version of the entire survey for learners to complete in order to demonstrate their learning
* **Instruction**: Have learners complete the sample survey in its entirety. The instructor will assess the accuracy of the submission and offer positive feedback (e.g., “You are ready for the real thing!”) or negative feedback (e.g., “You are not yet ready to complete your institution’s IPEDS reporting).

Explanation of Instruction

The design of this instruction incorporates the fundamental assumptions of the Behaviorism theory. There is an emphasis on changing observable learner behavior through the use of environmental influences. In the **Presentation of Stimulus** step, learners receive important information about the survey and why it needs to be taken seriously. This sets the stage for getting a desired response from the learners (accuracy in survey completion). In the **Change in Behaviors** step, learners recognize the significance of accurate reporting and realize the consequences of not reporting. Therefore, they adjust their behavior accordingly.

The **Observation of Behaviors** step is where instructors track actions made by the learners. This step gives instructors the opportunity to adjust instruction if they see behavior changes that need to be made. In response to learners’ behaviors, instructors can **reinforce or punish** learners by giving immediate feedback on mock survey responses through a built-in feedback system. This can come in the form of praise or corrective feedback. The idea is that learners will repeat correct behaviors and avoid mistakes. They are able to make these changes as they repeat the process of completing mock surveys and receiving feedback. They will have the opportunity to practice with different sets of data to reinforce their understanding. Finally, in the **Assessment of Observable Behaviors** step, learners complete a full survey and the instructor assesses the accuracy of the data. Again, feedback is provided that either reinforces learning through positive feedback or punishes inaccuracy with constructive criticism. In this way, learner behavior is shaped to become capable of completing the survey.

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Theory name: Cognitivism

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

**Key Theorists**

**Type in the names of the key theorists.**

* Jean Piaget
  + Internal processes of thinking and learning

* Jerome Bruner
  + Understanding mental processes and structures

**Fundamental Assumptions**

**Write a brief paragraph or give a bullet list of the fundamental assumptions of this theory.**

* Acquisition of knowledge is active, not passive

* Learning occurs through the receipt, organization, storage, and retrieval of information by the mind

* Learners have mental structures (schemas) that support knowledge acquisition

* Learners can control what they focus on and what they begin to process

* Learners can make sense of new content when they connect it to what they already know

* There are strategies that can help learners manage their working memory

* Information can be encoded and stored in long-term memory

**Design Process**

The processes that instructional designers should keep in mind that are foundational to cognitivism are:

* **Perception:** The designer needs to be aware of learners' capabilities and present sensory information that is relevant and meaningful to the learner. The sensory input can come through various multimedia (images, videos, etc.) and should aim to present information in a way that aligns to learners' previous knowledge of the subject. It needs to be designed to capture learners' attention.

* **Executive processes:** This is where the learners make a choice to focus attention on the instruction. Since there will be other sensory input competing for that attention, the designer needs to create material that will grab learners' attention. It is important for the design to be meaningful and relevant so that learners don't choose to discard it. Also, presenting something familiar to learners will help them focus their attention. Incorporate quizzes or activities to hold their attention, and have learners set SMART goals, plan strategies to achieve them, and track their progress. Offer immediate feedback so learners can know if their strategies are working.

* **Short-term or working memory:** Present material to learners in manageable chunks. Break down the information so that it takes up less space in learners' working memory. If the lesson is long, create segmented modules and have learners rehearse information through practice (quizzes, activities, etc.) so they can more easily process and retain the new information.

* **Encoding:** Help learners organize and elaborate new information by making connections in the lesson to learners' prior knowledge and/or experiences. Activate their prior knowledge through thoughtful questioning and review. Assist them in making connections through real-world examples and in using their own experiences to organize the material. This will help learners encode the new information they receive and will help them retrieve it later from long term memory.

* **Long-term memory:** Since there is theoretically no limit to the duration and capacity of information stored in long-term memory, the more the learners are able to move knowledge into long-term memory with good design, the better. Again, the design should focus on making meaningful connections so that learners can more easily access information stored in long-term memory when needed. When information is retrieved often from long-term memory, this creates better outcomes for retaining the information. Thus, the design should incorporate repetition and frequent review materials.

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Topic**: Completing the Graduation Rates Survey for IPEDS

**Learners**: Administrators at postsecondary institutions

**Learning Objective**:

1. Learners will correctly identify, in a knowledge check, the steps involved in completing the Graduation Rates survey
2. Learners will accurately complete and lock the survey

Steps for Instruction

Note: These are not purely sequential. There is some overlap with the steps (e.g., the quizzes after each section show up in executive processes, working memory, and long-term memory).

**1. Perception**

**Activity**: Provide an overview of the IPEDS graduation rates survey

* **Preparation**: Create an attention-grabbing visual that depicts the significance of accurate IPEDS reporting (i.e., showing the share of students who receive federal financial aid). Prepare additional multimedia such as a high-level diagram of the survey process with an accompanying voice gives a brief overview of how the survey is to be completed.
* **Instruction**: Begin by emphasizing the need for accurate and timely submission of IPEDS data. Show the visual of the share of students who would be negatively impacted if the institution did not fulfill its responsibility of data submission. Have learners watch and listen to the narrated voice explaining the high level diagram that introduces the steps of survey completion.

**2. Executive Processes**

**Activity**: Have learners set goals and plan strategies to achieve them

* **Preparation**: Have learners commit on paper to being responsible for the accurate and timely submission of IPEDS graduation data and have them set SMART learning goals for themselves (i.e., “I will know where to find the required data by the end of the section”, “I will triple check each number right after I enter it,” etc.). Have them write these goals down, along with strategies to achieve them. Create quizzes for each instructional section. Incorporate immediate feedback messages into the quizzes that explain to learners why an answer was correct or incorrect.
* **Instruction**: Present the key steps involved in completing the IPEDS graduation rates survey, section by section. For each section, incorporate a quiz to hold the learners’ attention. After each quiz, provide immediate and meaningful feedback so learners know if adjustments need to be made to the way they are processing the new information. Learners will also be encouraged to revisit their goals during each instructional section.

**3. Short-term Memory or Working Memory**

**Activity**: Present a step-by-step guide to completing the survey

* **Preparation**: Using the previous high-level diagram showing an overview of the process, add bullet points providing detail at each step.
* **Instruction**: Break the information down into smaller segments, presenting the key steps involved in completing the IPEDS graduation rates survey one section at a time. Using the prepared diagram, introduce a step and then pause to explain the specific tasks (beginning with basic tasks and move to more complex ones) required for that section. Also show learners what the corresponding form for that section looks like in the survey. After each section, have learners take a quiz to check their understanding.

**4. Encoding**

**Activity**: Discussion on experience with data entry and compliance reporting

* **Preparation**: Create some visuals using marked up screenshots of good data entry vs. bad data entry. Prepare a screenshot from College Navigator showing CWI’s publicly available data sourced from IPEDS
* **Instruction**: Pose questions or prompts to learners such as, “Have you ever had to report institutional data?” or “Think back to a time when you made a mistake in your data entry. What consequences did it have?” Invite learners to think about their own experiences with data and reporting and share their insights with each other. Show prepared visuals of good data entry vs. bad data entry. Explain the impacts data entry can have on publicly available data and transparency while showing CWI's data taken from the College Navigator website. Finally, encourage learners to think about how they can create their own mental models of the survey process based on their previous experiences with data entry and compliance reporting (or similar).

**5. Long-term Memory**

**Activity**: Complete practice surveys and submit a final graduation rates survey

* **Preparation**: Create sample versions of survey sections for learners to work on in order to practice. Incorporate feedback. Prepare a final knowledge check on the entire survey process. Prepare a final survey for learners to complete to demonstrate their learning and be assessed.
* **Instruction**: After each section, have learners apply what they have learned by filling out a sample survey with dummy data. They will receive immediate feedback on their entries. Give a final review of all of the elements of the survey and as an activity, have learners do a knowledge check on the steps and tasks required. Have learners complete the sample survey in its entirety. The instructor will assess the accuracy of this final submission and provide feedback.

Explanation of Instruction

The design of this instruction incorporates the fundamental assumptions of Cognitivism. Emphasis is placed on learners taking an active part in the processing of information. During **Perception**, the importance and significance of IPEDS reporting is introduced in a way that captures the attention of learners and sets the stage for the learning process. Attention is reinforced through multimedia such as visuals and a narrated overview of the survey process. **Executive Processes** happen when learners think about and set SMART goals, plan strategies to achieve them, and track the progress of their goals related to survey completion. Routine quizzes can hold the learners’ attention and immediate feedback on those quizzes allow learners to make adjustments to their learning strategies where needed.

During the **Short-term Memory or Working Memory** stage, lesson material is broken down into smaller segments to reduce cognitive load for the learners. Each step in the survey completion process is addressed separately and outlined in detail. Quizzes at the end of each segment will be administered in order to reinforce retention. **Encoding** happens when learners reflect on their past experiences with data entry and compliance reporting. The new knowledge they receive during the instruction is integrated with their existing knowledge of data reporting. Learners also make connections between the quality of data entry and potential consequences. Finally, during the **Long-term Memory** stage, learners retrieve and apply what they have learned by practicing with sample surveys. Again, immediate feedback is provided to reinforce learning. A final assessment is given to learners that tasks them with completing an entire IPEDS graduation rates survey to gauge if they are able to complete it independently.

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Theory name: Constructivism

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

**Key Theorists**

**Type in the names of the key theorists.**

* Jean Piaget
  + considered first cognitive constructivist, assimilation, accommodation
* Jerome Bruner
  + discovery learning, scaffolding, spiral curriculum
* John Dewey
  + father of experiential learning, reflection, real-world experiences

**Fundamental Assumptions**

**Write a brief paragraph or give a bullet list of the fundamental assumptions of this theory.**

* Learners have an active role in constructing knowledge

* Knowledge is best gained through reflection and active construction within the mind

* Learners acknowledge they are at the center of knowledge acquisition and interpretation

* Learners construct an interpretation of information based on past experiences, personal views, and cultural background (constructing knowledge depends on individual subjective interpretation of information)

* Learning is dynamic process of assimilation and accommodation

**Design Process**

* **Create a learner-centered environment:** Instead of a setting where the instructor simply delivers information, create a space where learners can engage, explore, and reflect. The instructor will act as a guide/coach to the learning process.

* **Provide opportunities for learning through discovery:** Create instruction with strategies that facilitate active construction of knowledge. Example strategies include:

* Scaffolding: Gradually decrease the amount of support given to learners as they become more familiar with the material, letting them have more freedom to explore and think critically about the lesson.

* Project-Based Learning: Create opportunities for students to engage in hands-on activities where they can learn, through personal experience, how to accomplish a task.

* Thematic Learning: Present learners with a broad theme or topic and allow them to self-discover based on personal interest.

* **Incorporate Reflection:** Whatever the strategies used to facilitate active construction of knowledge, incorporate moments of reflection for learners. This will help them process and internalize their learning as they make connections with prior knowledge and experience.

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Topic**: Completing the Graduation Rates Survey for IPEDS

**Learners**: Administrators at postsecondary institutions

**Learning Objective**:

1. Learners will correctly identify, in a knowledge check, the steps involved in completing the Graduation Rates survey
2. Learners will accurately complete and lock the survey

Steps for Instruction

**1. Create a learner-centered environment**

**Activity**: Introduce learners to the IPEDS graduation rates survey and the resources available for survey completion

* **Preparation**: Compile a list of resources for learners to use as they discover how to complete the survey. Include links to online resources from the National Center for Education Statistics (NCES) as well as files containing previous years’ data submissions. Grant learners access to the institution’s Power BI report that contains the data needed to complete the survey.
* **Instruction**: Provide a brief overview of the importance of the accurate and timely submission of IPEDS data. Share resources that are available to learners as they dig into the survey completion process. Emphasize that learners will be responsible for the construction of their knowledge of how to complete the survey but that the instructor will be on hand to guide, prompt, and answer questions.
* **Reflection:** Invite learners to think about and share their prior experiences with institutional data and the consequences of accurate reporting. Ask questions such as, “How does accuracy in reported graduation rates impact CWI’s image?”

**2. Provide opportunities for learning through discovery**

**Activity**: Have learners become familiar with and complete the survey one section at a time

**Strategy A: Scaffolding**

* **Preparation**: Create a visual walkthrough for the first part of the survey that demonstrates the basic structure of each section.
* **Instruction**: Introduce learners to the first portion of the graduation rates survey (graduation rate at 150% of time). Give an overview of the process of finding and entering data for this section. Show them how the survey connects to the resources they have provided with. Ask learners how they can apply this new knowledge to future sections of the survey. Explain that the instructor will be available for guidance, but that it is up to the learner to research what is needed for subsequent portions of the survey. Feedback will be provided to help learners know if they are on the right track.
* **Reflection:** Prompt learners to share how they plan to organize their strategies for completing the survey. Ask questions such as, “How do you plan to ensure accuracy in your data entry as you work individually on the survey?”

**Strategy B: Project-based learning**

* **Preparation**: Create sample data in Power BI and mock surveys for learners to practice with. Prepare a glossary of important terms for reference.
* **Instruction**: Instruct learners to work through the different sections of the survey using the resources they have been given. Encourage them to seek out other resources that can help them with the process (e.g., online tutorials). Learners construct their knowledge and apply it by filling in the necessary data. The instructor is available to offer guidance but will step back and allow the learners to work independently to discover how to successfully complete the survey.
* **Reflection:** Have learners reflect on their experience filling out the different sections of the survey. Prompt them with questions such as, “What was the most challenging part?”

**3. Knowledge check**

**Activity**: Learners will be given a final practice survey to assess their ability to complete it with accuracy.

* **Preparation**: Prepare a full graduation rates survey that mirrors the actual IPEDS survey. Create sample data within a Power BI report for learners to use to complete the survey.
* **Instruction**: Administer a final knowledge check by giving learners a full graduation rates survey to fill out. Let them know that they are free to use all available resources. Emphasize again the importance of accuracy in their reporting. Provide timely and meaningful feedback, including positive feedback for correct entries and constructive feedback for incorrect entries.
* **Reflection:** Have learners share thoughts on whether they feel ready to complete an actual IPEDS survey. “If tasked with completing the graduation rates survey tomorrow, would you feel comfortable doing so? Why or why not?”

Explanation of Instruction

The design of this instruction incorporates the fundamental assumptions of Cognitive Constructivism. Emphasis is placed on the role of learners as they actively construct knowledge through discovery, independence, and hands-on experience. An important first step is **creating a learner-centered environment** where expectations are set and learners understand their role in the learning process. After being introduced to the IPEDS graduation rates survey, learners are given resources to help them navigate the process. The instructor explains that his or her role in the learning process is to act as a guide who will offer support, but that the learners are responsible for constructing their new knowledge. The main instruction happens when learners are **provided with opportunities for learning through discovery**. During this stage, initial guidance through the use of **scaffolding** helps learners gain context and equips them with what they need to begin their own discovery. This stage also provides opportunity for **project-based learning** where mock surveys are worked on by the learners using sample data. Here, they are able apply their problem solving skills and independently demonstrate their learning.

Throughout the instruction, **reflection** is integrated so that learners can assess their progress. Thought-provoking questions are asked at each stage of the learning to help them make connections and solidify their knowledge. Finally, there is a **knowledge check** at the close of the instruction where learners complete a full practice survey. By applying what they have learned and the knowledge they have constructed, they demonstrate their ability to accurately complete an IPEDS graduation survey. Timely and meaningful feedback is provided so learners can gauge their readiness to complete an actual survey.

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Theory name: Socioculturalism

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

**Key Theorists**

* Lev Vyotsky
  + Founder of sociocultural theory; culture and social interactions shape mental ability

* Alexei Leontiev
  + Originator of activity theory; environment (social, cultural, historical) influences learning

**Fundamental Assumptions**

* The social and cultural environments that people are a part of influence their cognitive development

* Learning happens through interactions with others and does not happen in isolation. It is collaborative.

* Cultural tools and signs, such as language, art, and symbols help shape human thinking and cognition

* Cognitive development differs among learners with different cultural backgrounds and different historical contexts

**Design Process**

* **Prioritize social interaction’s role in learning:** Encourage a collaborative environment. Emphasize guided participation. Work closely with instructors to design instruction that aligns with socioculturalism.

* **Highlight language as a learning tool:** Incorporate cultural tools (language, art, signs) and provide various contexts in which they can be leveraged. Be aware of the "funds of knowledge" learners have gained through their prior experiences and cultural backgrounds.

* **Teach in the Zone of Proximal Development (ZPD):** Create content that appropriately challenges learners. Design with the individual learner in mind and give them responsibility and ownership for their learning. Provide scaffolding that supports the learning process. Instructors act as facilitators, not just information dispensers. Use dynamic assessments to track progress and inform needed changes in the design.

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Topic**: Completing the Graduation Rates Survey for IPEDS

**Learners**: Administrators at postsecondary institutions

**Learning Objective**:

1. Learners will correctly identify the steps involved in completing the Graduation Rates survey
2. Learners will accurately complete and lock the survey

Steps for Instruction

**1. Prioritize social interaction’s role in learning**

**Activity**: Introduce learners to the IPEDS graduation rates survey and set the stage for a collaborative environment

* **Preparation**: Give survey access to the learners and make sure they have permissions to view the institution’s relevant data.
* **Instruction**:
  + Provide a brief overview of the importance of the accurate and timely submission of IPEDS data.
  + Inform learners that they will be working together to discover how the completion process works: they will share insights with one another and collaborate to complete a mock survey.
  + Emphasize that learners will be responsible for their knowledge of how to complete the survey but that the instructor will be on hand to guide, prompt, and answer questions.
  + Organize learners into groups of 3-4 people.

**2. Highlight language as a learning tool**

**Activity**: Distribute resources, highlight cultural tools, and promote discussion

* **Preparation**: Compile a list of resources for learners to use as they discover how to complete the survey. Include links to online resources from the National Center for Education Statistics (NCES) as well as files containing previous years’ data submissions. Also prepare a glossary of important terms and definitions related to the graduation rates surveys (e.g., cohort, 200% of time, exclusions)
* **Instruction**:
  + Separated into groups, have learners work through the survey together. They will become familiar with the language and cultural tools available for survey completion as they use the provided resources.
  + Prompt learners to discuss within their groups the different contexts in which institutional data can be used.
  + Encourage learners to share with one another how they interpret each portion of the survey and how they believe the process should go.

**3. Teach in the Zone of Proximal Development (ZPD)**

**Activity**: Learners will complete a mock survey with individualized support

* **Preparation**: Prepare a practice survey to mirror the sections and data fields contained in an actual IPEDS graduation rates survey. Create a report in Power BI that contains mock institutional data for learners to use as they fill out the survey.
* **Instruction**:
  + Begin with a brief demonstration of how to fill out the first section of the survey. This will include showing learners how to navigate to the different portions of the survey and how to use the Power BI report to gather relevant data.
  + Provide each learner with a mock survey to complete.
  + Assign learners to work through the sections of the survey on their own, but provide scaffolding. Let them know they can ask their peers for help, seek assistance from the instructor, and use all available resources.
  + Facilitate their learning, providing guidance only when necessary. Continue to allow learners to take ownership of their learning.
  + Offer feedback and/or guidance based on individual learners’ needs.

**4. Assess learning with a final survey**

**Activity**: Learners will complete a final practice survey

* **Preparation**: Prepare a final practice survey to mirror the sections and data fields contained in an actual IPEDS graduation rates survey. Create another report in Power BI that contains mock institutional data for learners to use as they fill out the final survey.
* **Instruction**:
  + Provide learners with a final mock survey to complete for assessment. Reiterate the importance of accuracy in reporting.
  + Encourage learners to use their available resources to fill out the survey, including links, glossaries, and peer discussions.
  + Be available for support. Monitor progress and offer feedback and/or guidance based on learners’ needs.

Explanation of Instruction

The design of this instruction incorporates the fundamental assumptions of Socioculturalism. At the beginning of the instruction, a collaborative environment is created that **prioritizes social interaction’s role in learning**. After being introduced to the IPEDS graduation rates survey, learners will be taught how the instruction will proceed: they will work together in groups to discover how to complete the survey. While they will complete a mock survey independently afterwards, they will be able to use their peers and instructor as resources. In addition to collaborative resources, learners will also be provided with glossaries, previous surveys, and other online resources to help them with survey completion. This aspect of the instruction **highlights language as a learning tool**.

As learners complete a mock survey, they will **work in the Zone of Proximal Development (ZPD)**. The instructor will start with a guided demonstration using the first section of the survey. It will then be up to the learners to complete the rest of the mock survey. Again, they are encouraged to engage in discussions with their group and the instructor will be on hand to provide scaffolding in the form of individualized guidance and feedback. **A final survey to assess learning** will then take place, allowing learners to apply their new knowledge with a new set of data. Feedback is again provided during this stage to ensure learners are able to accurately complete an IPEDS graduation rates survey in a real-world scenario.

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Theory name: Connectivism

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

**Key Theorists**

* George Siemens
  + introduced concept of connectivism; delivered first MOOC

* Stephen Downes
  + highlighted the role of networks in creating and navigating knowledge; delivered first MOOC

**Fundamental Assumptions**

* Learning extends beyond individuals, residing in networks of information and connections

* Learning can occur outside individuals, such as within organizations or databases, and that the process of forming connections is central to learning

* Learning and knowledge rest in the diversity of opinions

* Learning is a process of connecting specialized nodes or information sources

* Learning may reside in non-human appliances

* The capacity to know more is more critical than what is currently known

* Nurturing and maintaining connections is needed to facilitate continual learning

* The ability to see connections between fields, ideas, and concepts is a core skill

* Currency—up-to-date knowledge—is the goal of connectivist learning

* Decision-making is itself a learning process, shaped by shifting realities and contexts

**Design Process**

* **Foster connections and networks**: Design environments where learners can have connections with peers, experts, etc. They will gain a better understanding of the material as they engage and share insights with others.

* **Leverage technology**: Use digital tools that connect learners with each other and with communities (forums, videos, etc). These tools provide opportunities for real-time collaboration.

* **Promote continuous learning and knowledge flow**: Help learners access current and evolving information from diverse sources. Using multiple sources allows learners to compile a broader range of knowledge on a topic. Understand that learning is an ongoing process.

* **Create opportunities for learners to collaborate**: Incorporate activities that encourage collaboration across diverse perspectives. Collaboration leads to critical thinking and considering diverse perspectives leads to deeper understanding.

* **Design problem-based learning activities**: Have learners analyze real-world scenarios. By doing so, they will develop problem-solving skills and make connections between concepts.

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Topic**: Completing the Graduation Rates Survey for IPEDS

**Learners**: Administrators at postsecondary institutions

**Learning Objective**:

1. Learners will correctly identify the steps involved in completing the Graduation Rates survey
2. Learners will accurately complete and lock the survey

Steps for Instruction

**1. Foster connections and networks**

**Activity**: Introduce learners to the IPEDS graduation rates survey and set the stage for a networked learning environment

* **Preparation**: Give survey access to the learners and make sure they have permissions to view the institution’s relevant data. Set up a Microsoft Teams group where learners can connect, ask questions, and share insights about the survey completion process.
* **Instruction**:
  + Provide a brief overview of the importance of the accurate and timely submission of IPEDS data.
  + Encourage learners to be active participants in collaborating with peers, experts, and/or the instructor as they navigate the survey. Learning from one another through the asking of questions and the sharing of strategies will enhance the experience. The instructor will act as a facilitator, but the learners will take ownership of their learning.
  + Organize learners into groups of 3-4 people, allowing diverse perspectives to be present in the collaborative experience.

**2. Leverage technology and promote continuous learning**

**Activity**: Introduce learners to digital tools and resources available for survey completion

* **Preparation**: Compile links to resources that learners can use as they discover how to complete the survey. Include online tutorials/webinars from the Association for Institutional Research (AIR) and from the National Center for Education Statistics (NCES). Link to documents on the NCES website that contain glossaries of important terms and definitions related to the graduation rates surveys, FAQs, as well as links to previous years’ data submissions. Also include NCES contact information for additional support.
* **Instruction**:
  + Stress the importance of using available technologies to assist in survey completion. Using diverse information sources will help provide a complete and current picture.
  + Direct them to adapt to new insights they gain through technological resources.
  + Encourage learners to use Power BI, online tutorials, forums, etc. as they discover the survey process.
  + Promote collaboration where learners ask questions and share insights in a collaborative Microsoft Teams environment

**3. Create opportunities for learners to collaborate on problem-based activities**

**Activity**: Have learners work together to fill out a practice survey using mock data

* **Preparation**: Prepare a practice survey that mirrors the sections and data fields contained in an actual IPEDS graduation rates survey. Create a report in Power BI that contains mock institutional data for learners to use as they fill out the mock survey.
* **Instruction**:
  + Provide learners with a mock survey to complete in collaboration with their groups
  + Encourage learners to share strategies and insights with one other, giving different perspectives on the process
  + Have learners review each other’s work and provide feedback
  + Involve every learner in the group in the accurate completion of the mock survey
  + Offer guidance where needed, but let learners take ownership of survey completion

Explanation of Instruction

The design of this instruction incorporates the fundamental assumptions of Connectivism. Emphasis is placed on networked learning, use of technology, continuous learning, and collaboration. After being introduced to the IPEDS graduation rates survey, the instructor sets the stage for a **collaborative environment** which **fosters connections and networks**. Learners are split into groups and are encouraged to connect with peers and their instructor to ask questions and share strategies. Learners will bring to the table different perspectives and they will be able to learn from one another. A key part of the instruction is **leveraging technology** to explore the survey process. Learners will use digital tools, such as online resources in the form of tutorials, glossaries, forums, and previous submissions to enhance their understanding of the IPEDS graduation survey.

The instruction also **promotes continuous learning** by directing learners to the most up-to-date material available for IPEDS data collection. Learners then collaborate by working together on a **problem-based activity** where they complete a mock survey using institutional data. This will enable them to gain a better understanding of the survey as they share insights, perspectives, and feedback with each other. Through this activity, learners apply their learning in a real-world context to ensure they are able to complete an actual IPEDS graduation rates survey with accuracy.

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Oar and Rubber Boot

Theorist name: Ivan Pavlov - Classical Conditioning

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* What were the key influences that shaped their thinking?
* Explain the main ideas or theories for which they are known.
* How does their theory impact instructional design?

**What were the key influences that shaped Pavlov's thinking?**

Some key influences on Pavlov’s work:

* He was working as a physiologist studying the digestive system of dogs and his observations led him to further exploration
* The shift in psychology toward investigating observable behaviors
* His experience with controlled tests that could quantify responses

**Explain the main ideas or theories for which Pavlov is known.**

Pavlov is primarily known for Classical Conditioning, the idea that behaviors can be learned through association (e.g., a neutral stimulus, such as a bell, can be paired with an unconditioned stimulus, such as food, to trigger an automatic response). In other words, Classical Conditioning explains how automatic responses can be transferred to previously neutral stimuli: The key components of Classical Conditioning are:

* Unconditioned Stimulus (UCS): A stimulus that naturally triggers a response (e.g., food)
* Unconditioned Response (UCR): The automatic reaction to the UCS (e.g., salivation to food)
* Conditioned Stimulus (CS): Initially neutral stimulus that triggers response after pairing (e.g., bell)
* Conditioned Response (CR): The learned response to the CS (e.g., salivation to bell alone)

At a high level, Pavlov’s work laid the foundation for Behaviorism in psychology and transformed our understanding of learning and behavior.

**How does Pavlov's theory impact instructional design?**

Pavlov's theory impacts instructional design in several ways:

* It provides a framework for shaping behavior. By linking stimuli with responses, instructional designers can use Classical Conditioning to elicit desired responses. Learners can be guided towards certain behaviors in classrooms and other trainings.
* It offers strategies to enhance engagement, motivation, and habit formation in learning environments.
  + In educational settings, it can be used to reinforce positive behaviors like submitting assignments on time.
  + In workplace trainings, conditioned incentives like bonuses or recognition can encourage productivity
* Some specific applications Pavlov’s theory include:
  + Using cues (like a bright light) to signal students to begin activities
  + Training specific behaviors through consistent pairing (raising hands before discussions)
  + Employing visual rewards (badges, checkmarks) to reinforce task completion
  + Creating positive associations through rewards for desirable behaviors
  + Using breaks or transitions to prepare learners for specific activities

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *AS IF YOU WERE THIS THEORIST.*  Include a paragraph that explains your design choices on behalf of this theorist.

**Classical Conditioning-Based Instructional Design for Completing the Graduation Rates Survey for IPEDS**

**Developed by Ivan Pavlov (and you!)**

**Topic:**

Completing the Graduation Rates Survey for IPEDS

**Learners:**

Administrators at Postsecondary Institutions

**Learning Objectives:**

1. **[LO1]** Learners will accurately identify all required steps involved in completing the IPEDS Graduation Rates Survey by scoring at least 90% on a knowledge check.
2. **[LO2]** Learners will enter dummy data into a simulated IPEDS Graduation Rates Survey and submit it with zero critical errors, as evaluated by a scoring rubric.
3. **[LO3]** Learners will demonstrate consistent use of a data verification process (e.g., checklist or review prompt) in 100% of survey sections during practice activities.

**Steps for Instruction Using Classical Conditioning**

**1. Establishing the Unconditioned Stimulus (US) and Unconditioned Response (UR)**

**Activity:** Expose learners to the natural consequences of incomplete or incorrect survey data submission.

* **US:** Real-world consequences of incorrect or incomplete data.
* **UR:** Learners feel concern, urgency, or anxiety.

**Preparation:**

* Create a case study and visuals of data submission errors and consequences.

**Instruction:**

* Present the case study.
* Facilitate discussion to create a natural sense of responsibility and urgency.

📌 *This section primes learner motivation but does not directly assess any of the learning objectives.*

**2. Pairing the Conditioned Stimulus (CS) with the Unconditioned Stimulus (US)**

**Activity:** Associate correct survey completion steps with reinforcing stimuli (e.g., chimes, checkmarks).

**Preparation:**

* Create a guided simulation with built-in reinforcement cues.

**Instruction:**

* Walk learners through survey steps.
* Provide positive reinforcement after correct actions and neutral prompts after mistakes.

📌 **[LO1]** *Learners will complete a knowledge check identifying each required step. A score of 90% or higher indicates mastery.*📌 **Assessment placement:** After the guided simulation, learners complete a knowledge check based on the correct sequence of survey tasks.

**3. Reinforcing the Conditioned Response (CR) through Repetition**

**Activity:** Practice entering data into simulated survey environments with reinforcing feedback.

**Preparation:**

* Set up multiple mock survey sections for practice.

**Instruction:**

* Learners complete small sections with reinforcing cues.
* Gradually reduce reinforcement as learners internalize the behavior.
* Encourage verbalization and reflection on task steps.

📌 **[LO2]** *Learners complete mock surveys with dummy data and are assessed using a rubric that checks for zero critical errors.*📌 **[LO3]** *Learners are required to complete a verification checklist before submitting each section.*📌 **Assessment placement:** During each section of the simulated survey, learners must (a) enter data accurately and (b) complete the verification process before submission.

**4. Stimulus Generalization: Applying the Conditioned Response to Real-World Scenarios**

**Activity:** Complete a full practice survey with slight variations using institutional tools.

**Preparation:**

* Create a full-length practice survey that mimics the real IPEDS platform.

**Instruction:**

* Learners complete the survey with minimal guidance.
* Reinforcement occurs only after the full submission.

📌 **[LO2]** *Learners apply their skills in a full simulation, completing the task with zero critical errors.*📌 **[LO3]** *Learners continue to apply the verification checklist during this independent exercise.*📌 **Assessment placement:** Final simulated submission scored using the same rubric and verification checklist criteria.

**5. Extinction and Spontaneous Recovery: Preventing the Loss of the Conditioned Response**

**Activity:** Refresher activities and spaced practice.

**Preparation:**

* Create short quizzes and simulations for ongoing practice.

**Instruction:**

* Deliver brief training before each reporting period.
* Provide immediate reinforcement or correction as needed.

📌 **[LO1]** *Reinforced via quick review quizzes on survey steps.*📌 **[LO2 & LO3]** *Reinforced via mini simulations that require accurate entry and verification.*📌 **Assessment placement:** Low-stakes, spaced assessments that reinforce all three learning objectives periodically over time.

**Explanation of Instruction**

This instructional design is grounded in the principles of **Classical Conditioning**, using a structured sequence of **stimulus pairing**, **positive reinforcement**, and **repetition** to develop automatic, accurate survey completion behavior. The instruction begins by presenting an **unconditioned stimulus**—real-world consequences of incorrect reporting—to evoke a natural **emotional response** in the learner. From there, learners are repeatedly exposed to the correct steps of the IPEDS Graduation Rates Survey while receiving **consistent positive reinforcement** (e.g., chimes, checkmarks, praise) for accurate performance. As these cues are paired with correct actions, learners begin to form a **conditioned response**—accurately completing and verifying survey data with minimal external prompting.

To strengthen this response, the training includes **guided practice**, **gradual fading of external reinforcement**, and **real-world simulation**, ensuring that learners can apply their skills across contexts. Throughout the lesson, the three learning objectives are measured: **identifying required steps** through a knowledge check (**LO1**), **accurately entering and locking data** in a simulated environment (**LO2**) and **consistently using a verification checklist** to reinforce quality control (**LO3**). Ongoing reinforcement activities and refresher tasks help prevent extinction of the behavior, allowing learners to retain and apply their skills long-term with confidence and precision.

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Oar and Rubber Boot

Theorist name: B.F. Skinner - Operant Conditioning

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* What were the key influences that shaped their thinking?
* Explain the main ideas or theories for which they are known.
* How does their theory impact instructional design?

**What were the key influences that shaped Skinner’s thinking?**

Skinner’s thinking was heavily influenced by the behaviorist movement of the early 1900s, which focused on observable behaviors rather than internal mental processes. A major influence was Edward Lee Thorndike and his Law of Effect. This law proposed that behaviors followed by favorable consequences are more likely to be repeated, while those followed by unfavorable consequences are less likely to be repeated. Thorndike’s puzzle box experiments with cats laid the groundwork and Skinner built upon these ideas by designing his own controlled experiments with animals (e.g., rats and pigeons) in Skinner boxes, which allowed him to measure how behavior changes in response to applied consequences.

**Explain the main ideas or theories for which Skinner is known.**

Skinner is primarily known for Operant Conditioning, a theory that explains how behavior is acquired and modified through reinforcement and punishment. Key ideas include:

* Behavior is shaped by consequences, either reinforcing or punishing.
* Skinner emphasized observable behavior and believed learning could be measured through changes in responses to stimuli and consequences.
* Reinforcement increases the likelihood of a behavior occurring again:
  + Positive Reinforcement: Adding something pleasant (e.g., food pellet after lever press)
  + Negative Reinforcement: Removing something unpleasant (e.g., stopping a shock after lever press)
* Punishment decreases the likelihood of a behavior:
  + Positive Punishment: Adding something unpleasant (e.g., delivering a shock)
  + Negative Punishment: Removing something pleasant (e.g., taking away a reward)

**How does Skinner’s theory impact instructional design?**

Skinner’s theory impacts instructional design in several ways:

* It provides a framework for using rewards, consequences, and feedback to influence learner behavior
* Operant Conditioning can be applied to learning in four key ways:
  + Positive Reinforcement: For example, gamification (points, badges, leaderboards), instant feedback, and reward systems encourage desired learning behaviors
  + Negative Reinforcement: For example, adaptive learning paths can be implemented to reduce workloads for proficient learners
  + Positive Punishment: For example, immediate corrective feedback and simulated negative consequences can be given following learner mistakes
  + Negative Punishment: For example, restricted access to privileges or content can be enforced when learners do not meet expectations or performance criteria

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *AS IF YOU WERE THIS THEORIST.*  Include a paragraph that explains your design choices on behalf of this theorist.

**Operant Conditioning-Based Instructional Design for Completing the Graduation Rates Survey for IPEDS**

**Topic:** Completing the Graduation Rates Survey for IPEDS

**Learners:** Administrators at Postsecondary Institutions

**Learning Objectives:**

* [LO1] Learners will accurately identify all required steps involved in completing the IPEDS Graduation Rates Survey by scoring at least 90% on a knowledge check.
* [LO2] Learners will enter dummy data into a simulated IPEDS Graduation Rates Survey and submit it with zero critical errors, as evaluated by a scoring rubric.
* [LO3] Learners will demonstrate consistent use of a data verification process (e.g., checklist or review prompt) in 100% of survey sections during practice activities.

**1. Establish the Target Behavior and Set Up Reinforcement Structure**

**Activity:** Explain expectations, define correct survey behaviors, and introduce the reinforcement schedule.

* **Preparation:** Create a behavior contract or digital dashboard outlining how learners earn points or badges for completing key tasks correctly.
* **Instruction:**
  + Introduce desired behaviors (accurate entry, step completion, checklist use).
  + Explain that correct behaviors will be positively reinforced with immediate feedback, points, badges, or praise.
  + Clarify that critical errors result in constructive correction (mild negative punishment = loss of a point, retry required).

📌 *This stage sets the behavioral stage and motivation framework for all learning objectives.* 📌 *No direct assessment yet, but clear performance expectations and contingencies are in place.*

**2. Positive Reinforcement Through Shaping**

**Activity:** Teach survey steps by breaking them into small, achievable components and reinforcing progress.

* **Preparation:** Design a task sequence (e.g., Step 1: Define cohort → Step 2: Apply exclusions → Step 3: Enter completions).
* **Instruction:**
  + Present one step at a time.
  + After each correct response or action, provide immediate positive reinforcement (e.g., sound, message, visual badge).
  + Use *shaping* to guide learners toward more complex behaviors by reinforcing incremental improvements.

📌 **[LO1]** Knowledge check follows this segment. Learners must identify all required steps with ≥90% accuracy.  
 📌 *Assessment placement: After shaping sequence, learners complete the knowledge check.*

**3. Reinforcement of Accurate Performance in Simulated Practice**

**Activity:** Learners complete mock sections of the survey with embedded reinforcement mechanisms.

* **Preparation:** Create simulated survey modules that provide immediate consequences for correct/incorrect actions.
* **Instruction:**
  + Provide small sections of the survey and dummy data.
  + Deliver reinforcement for correct entries (e.g., points, visual progress bar, praise from facilitator).
  + Implement *negative reinforcement* by removing annoying alerts only when data is verified correctly.

📌 **[LO2]** Learners submit simulated survey sections with zero critical errors.  
 📌 **[LO3]** Learners must complete a verification checklist for each section.  
 📌 *Assessment placement: After each section, scored by rubric and checklist adherence.*

**4. Generalization and Schedules of Reinforcement**

**Activity:** Learners complete a full simulated survey with fewer cues and variable reinforcement.

* **Preparation:** Simulate the full IPEDS platform experience using institutional-style data.
* **Instruction:**
  + Learners work more independently.
  + Provide reinforcement on a *variable ratio schedule*—not every correct behavior is reinforced, but reinforcement is still given unpredictably.
  + Reward complete, error-free submissions with a certificate or recognition.

📌 **[LO2]** Demonstrated by accurately completing a full mock survey.  
 📌 **[LO3]** Maintained by consistent use of the checklist across all sections.  
 📌 *Assessment placement: Final full simulation scored via rubric and checklist.*

**5. Maintenance and Avoiding Extinction Through Refresher Training**

**Activity:** Periodic booster sessions with reinforcement to maintain behavior.

* **Preparation:** Design mini-quizzes and partial survey simulations that can be completed quarterly.
* **Instruction:**
  + Provide low-stakes practice with immediate feedback and reinforcement.
  + Use *intermittent reinforcement* to prevent extinction of correct behaviors.
  + Include small incentives (e.g., digital badges, public recognition) to maintain motivation.

📌 **[LO1]** Periodic review quizzes reinforce step knowledge.  
 📌 **[LO2 & LO3]** Mini-simulations reinforce accuracy and quality control practices.  
 📌 *Assessment placement: Spaced, low-stakes activities administered throughout the year.*

**Explanation of Instruction**

This instructional design is grounded in the principles of **Operant Conditioning**, using a structured sequence of **positive reinforcement**, **shaping**, **immediate feedback**, and **clear behavior-consequence relationships** to build accurate and consistent survey completion behaviors. The lesson begins by clearly defining the desired actions (e.g., completing steps in order, verifying data) and establishing **contingencies of reinforcement**—correct actions are followed by **reinforcing consequences** such as praise, badges, or points, while incorrect responses trigger **corrective feedback** or **mild negative consequences** like retry prompts. As learners demonstrate incremental improvements, they are guided through the process using **shaping**, receiving reinforcement for each successive step toward the complete behavior.

To promote long-term retention and real-world transfer, the design gradually introduces **intermittent and variable reinforcement schedules**, decreasing reliance on external rewards while still maintaining motivation. A full survey simulation provides opportunities for learners to practice the complete task with fewer cues and more authentic conditions, while still receiving **reinforcement tied to task completion and accuracy**. Ongoing **spaced practice**, **booster activities**, and **low-stakes performance checks** are used to **prevent extinction** of the learned behaviors. Each learning objective is reinforced through behavioral practice and measurable performance: **identifying required steps** (LO1), **accurate data entry and submission** (LO2), and **consistent use of a verification checklist** (LO3), all shaped and sustained through strategic use of operant conditioning principles.

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Oar and Rubber Boot

Theory name: Informational Processing Theory

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

**KEY THEORISTS**

* George A. Miller
  + Proposed that the human brain has limited capacity in short-term memory
  + Wrote "The Magical Number Seven, Plus or Minus Two"
  + Emphasized chunking information
  + Emphasized the role of internal cognitive processes in learning
* Richard Atkinson & Richard Shiffrin
  + Developed the multi-store model of memory
    - Introduced the stages of sensory memory, short-term memory, and long-term memory
    - Emphasized the role of processes like encoding, rehearsal, and retrieval
* Endel Tulving
  + Distinguished between different types of long-term memory
    - Semantic memory - facts and concepts
    - Episodic memory - personal experiences
* Alan Baddeley & Graham Hitch
  + Proposed working memory as an alternative to the short-term memory model
  + Introduced components to working memory like central executive, visuospatial sketchpad, phonological loop, and episodic buffer

**FUNDAMENTAL ASSUMPTIONS**

* Learning is a continuous process that doesn’t just happen at certain development stages
* Memory and knowledge formation work together
* Memory is composed of:
  + Sensory Memory: Filters and processes incoming sensory information and lasts 0.5–3 seconds
  + Short-Term/Working Memory: Temporarily stores and processes information and lasts about 20–30 seconds. It can only hold around 7 chunks of information.
  + Long-Term Memory: Stores information indefinitely and with unlimited capacity
* Attention is needed to bring a stimulus into short-term memory from sensory memory
* Rehearsal, encoding, and assimilation of new information within working memory is used to transfer it to long-term memory
* Retrieval from long-term memory brings information back into working memory
* Learning effectiveness depends on things like minimizing distractions, chunking information, etc. to manage cognitive load

**DESIGN PROCESS**

* Capture Attention
  + Use thought-provoking questions
  + Use relevant real-world problems
  + Limit extraneous distractions
* Support Encoding
  + Use dual-coding techniques
  + Model cognitive processes
  + Have learners rehearse information through guided practice
* Manage Cognitive Load
  + Use chunking to break information into meaningful segments
* Activate Schemas
  + Have learners recall prior knowledge before introducing new material
  + Have learners make connections and verbalize their thinking processes
  + Use analogies where appropriate

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design for IPEDS Survey Completion Training Using Informational Processing Theory**

**Target Learners**: Postsecondary administrators responsible for IPEDS reporting

**Learning Objectives:**

* **(LO1)** Identify the key steps involved in completing the IPEDS Graduation Rates survey.
* **(LO2)** Demonstrate the ability to accurately enter data into each section of the IPEDS Graduation Rates survey.
* **(LO3)** Apply error-checking strategies to review and lock the survey.

**1. Capture Attention *(Supports LO1)***

**Purpose**: Direct learners’ focus and prime them for learning.

* **Instructional Strategy**:  
    
  + Pose a scenario-based question: *“What happens if the IPEDS submission is late or incorrect?”*
  + Present a **real-world case** showing the consequences of submission errors (e.g., withheld federal aid, flawed public data).
  + Display a **visual flowchart** overviewing the IPEDS Graduation Rates survey steps to create a high-level mental model (LO1).
  + Eliminate distractions by using clean layouts, minimal text, and focused visuals.

**2. Support Encoding *(Supports LO1, LO2, LO3)***

**Purpose**: Help learners process and store information into long-term memory.

* **Instructional Strategy**:  
    
  + Use **dual-coding**: narrated walkthroughs of each survey section with side-by-side visuals (LO1).
  + **Model data entry tasks**: Demonstrate how to locate source data and enter it correctly into the IPEDS interface (LO2).
  + Model common **error-checking techniques**: Cross-referencing cohort definitions, reviewing totals before locking (LO3).
  + Include **guided practice** with each section: learners complete exercises using sample data and receive corrective feedback (LO2, LO3).
  + Reinforce accuracy and attention to detail by prompting learners to explain their choices during guided examples.

**3. Manage Cognitive Load *(Supports LO1, LO2)***

**Purpose**: Help learners process information without overload.

* **Instructional Strategy**:  
    
  + Organize content into **modular sections**: e.g., “Cohort Selection,” “Data Entry,” “Review and Lock.”
  + Use **chunking**: introduce no more than 3–5 related tasks at once (LO1).
  + Incorporate **short quizzes or check-ins** after each module to support information retention and transfer (LO2).
  + Use consistent visual cues (colors, icons, layout) to help learners focus on relevant information.

**4. Activate Schemas *(Supports LO1, LO2, LO3)***

**Purpose**: Connect new content with learners’ existing knowledge for deeper processing.

* **Instructional Strategy**:  
    
  + Begin with a prompt: *“Think back to your last compliance report—what steps did you follow to ensure accuracy?”*
  + Learners share past reporting experiences in a poll or small group discussion.
  + Use **analogies** to make abstract steps concrete: e.g., “Locking the IPEDS survey is like hitting submit on your taxes—only after careful review.”
  + Prompt learners to **verbalize their thinking** as they work through mock examples: “Why did you choose that field for this value?” (LO2, LO3).
  + **Assessment tie-in**: Learners draft personal SOP checklists or flowcharts to show understanding of the reporting sequence (LO1).

**5. Practice and Assessment *(Directly Measures LO1, LO2, LO3)***

**Purpose**: Reinforce learning through practice, feedback, and application.

* **Practice Activities**:  
    
  + Learners complete **sectional simulations** of IPEDS using dummy data (LO2).
  + Include **common error scenarios**: “You entered 85 students in one field but forgot to report gender breakdown—what’s wrong?” (LO3).
  + Provide **immediate feedback** and explanations for corrections.
* **Final Assessment**:  
    
  + Learners complete a **full mock IPEDS Graduation Rates survey**, entering and reviewing data across all sections (LO2, LO3).
  + Include a **knowledge check** covering survey steps, sequence, and roles (LO1).
  + Ask learners to perform a **self-review and lock** step using a checklist to simulate the final submission phase (LO3).

**Conclusion and Reflection *(Reinforces LO1, LO2, LO3)***

**Purpose**: Support long-term retention and reflective practice.

* **Instructional Strategy**:  
    
  + Recap the **key IPT strategies** used in the training: dual coding, chunking, schema activation, and practice with feedback.
  + Prompt learners to reflect: *“Which section of the survey do you now feel most confident completing, and why?”*
  + Provide a **visual checklist handout** summarizing key steps and review points (supports long-term use and future recall).
  + Encourage learners to create a **personal or team SOP** for future IPEDS reporting (LO1, LO3).

**EXPLANATION OF INSTRUCTION**

This instructional design is grounded in the principles of **Information Processing Theory**, focusing on how learners take in, process, and store information. This approach will support accurate and consistent IPEDS survey completion. The lesson begins by **capturing attention** through real-world consequences and high-impact visuals, directing focus to key elements needed for successful reporting (LO1). As information enters the sensory register, **dual-coding techniques**, such as narrated flowcharts, help transfer content into short-term memory. Learners are guided through each section of the survey using **modeled cognitive processes** and provided with **guided practice** that includes immediate feedback, reinforcing accurate mental models and supporting **encoding** into long-term memory (LO2, LO3).

To avoid overwhelming learners, the training uses **chunking** to break complex tasks into smaller, manageable steps, reducing **cognitive load** and improving processing efficiency. Learners are prompted to **activate prior schemas** by reflecting on past compliance tasks and explaining their reasoning during practice, strengthening the connection between new and existing knowledge (LO3). A final simulation allows learners to retrieve and apply what they've learned with minimal scaffolding, demonstrating mastery of the process. Each learning objective is supported by intentional strategies aligned with information processing theory: identifying steps (LO1), accurate data entry (LO2), and error-checking for submission (LO3).

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Oar and Rubber Boot

Theory name: Cognitive Load Theory

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* John Sweller (Foundational Theorist)
  + Developed CLT in the 1980s
  + Identified three types of cognitive load: intrinsic, extraneous, and germane
  + Emphasized the need to manage each in strategic ways to enhance learning
* Other theorists who influenced CLT:
  + George Miller
    - Shaped the understanding of memory capacity
    - Introduced the 7 ± 2 rule for working memory limits
  + Richard Atkinson & Richard Shiffrin
    - Developed the multi-store model of memory
    - Explained how information moves through the stages of sensory memory, short-term memory, and long-term memory
    - Model aims to reduce forgetting and increase encoding
  + Sir Frederic Bartlett and Jean Piaget
    - Provided foundational insights into schema theory
  + Fred Paas and Jeroen Van Merriënboer
    - Measured effects of CLT-based instructional strategies
  + Richard Mayer
    - Turned CLT into practical applications for multimedia instruction with his multimedia principles that target cognitive load

FUNDAMENTAL ASSUMPTIONS

* Working memory is limited in duration and capacity. Learning is more effective when instructional materials are designed with these considerations in mind.
* Total cognitive load (the amount of information actively in working memory) is the sum of:
  + Intrinsic Load: the load necessary to complete the learning task
  + Extraneous Load: unnecessary information included in the learning process
  + Germane Load: the load necessary to make meaning of the learning task (to transfer information to long-term knowledge through schema-building)
* The best learning occurs when extraneous load is reduced, intrinsic load is simplified, and germane load is maximized. This promotes schema construction and automation
* Novices benefit the most from CLT

DESIGN PROCESS

Cognitive Load Theory helps instructional designers consider their learners before designing instruction, helps them simplify the material to more clearly meet instructional goals, and provides better strategies to help learners make the most of their mental processing capacity. Here is how instruction can be designed in line with CLT:

* Reduce Extraneous Load
* Eliminate distractions and irrelevant information
  + Take out redundancy
  + Take out overly complex visuals
  + Stick to what is necessary for the learning event
* Apply principles of multimedia design that reduce extraneous load
  + Coherence, signaling, spatial and temporal contiguity
* Provide clear instructions
* Make it easy to navigate lesson content
* Simplify Intrinsic Load
* Scaffold learning
  + Pre-train key components and concepts
  + Segment complex material into meaningful chunks
  + Consider learner expertise to determine task complexity
* Maximize Germane Load
* Include activities that promote meaning-making
  + Reflection
  + Worked examples
  + Self-explanation
* Include generative learning tasks
  + Categorization
  + Comparison
  + Summarization
* Encourage schema construction
  + Analogies
  + Problem-solving
  + Concept mapping

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design for IPEDS Survey Completion Training Using Cognitive Load Theory**

**Target Audience**: Postsecondary administrators responsible for IPEDS reporting  
**Training Topic**: Completing the IPEDS Graduation Rates Survey

**Learning Objectives**

* **(LO1)** Identify each step required in the IPEDS Graduation Rates survey process.
* **(LO2)** Enter and review institutional data correctly within the survey system.
* **(LO3)** Apply appropriate review and verification procedures to complete and lock the survey.

**🧠 Learner Analysis**

**Why this matters**: CLT emphasizes that instruction must be tailored to the learner's prior knowledge to manage intrinsic load effectively.

* **Primary Learners**: New or recently assigned institutional research staff, data entry specialists, or compliance officers with limited experience in IPEDS reporting.
* **Secondary Learners**: Experienced staff who may be transitioning from other IPEDS components or refreshing their skills after updates to survey tools/processes.
* **Assumed Prior Knowledge**:
  + Familiarity with institutional student data
  + Basic spreadsheet or SIS navigation skills
  + Varying degrees of experience with federal compliance reporting

**Instructional Implications**:

* **Novice-friendly scaffolds** (step-by-step walkthroughs, glossaries, tooltips)
* **Optional pre-test or readiness check** for experienced learners to bypass foundational modules
* **Scenario variety** in examples and assessments to account for a range of institutional contexts

**1. Reduce Extraneous Load *(Supports LO1, LO2)***

**Strategies**:

* Simplified visuals with only essential text/graphics per slide (LO1)
* Removal of decorative images and background media
* Mayer’s **coherence**, **signaling**, and **spatial/temporal contiguity** principles in multimedia (LO2)
* Guided interface with clear navigation and visual cues
* Job aid handout: Key terms and icons explained in plain language

**Embedded Assessment Elements**:

* Micro-quizzes embedded in each module with 1–2 focused items (e.g., “Which data source would you use for this field?”)
* All items designed for **low extraneous load**—no irrelevant distractors or off-topic examples (LO1, LO2)

**2. Simplify Intrinsic Load *(Supports LO1, LO2, LO3)***

**Strategies**:

* **Pre-training module**: IPEDS definitions, deadlines, role expectations (LO1)
* **Content segmentation** into 4 core chunks:
  1. Data prep and cohort identification
  2. Entering graduation data
  3. Verifying completeness and accuracy
  4. Locking and submitting the survey
* **Scaffolds for complexity**:
* Partially worked examples
* In-line hints
* Visual data source references
* Optional **readiness quiz** to place experienced users ahead

**Embedded Assessment Elements**:

* Brief interactive **scenario-based questions** at the end of each segment (e.g., “What should you double-check before moving past this section?”) (LO3)
* Immediate, explanatory feedback reinforces correct schema-building

**3. Maximize Germane Load *(Supports LO1, LO2, LO3)***

**Strategies**:

* **Worked examples** with instructor narration and modeling of survey completion (LO2)
* **Self-explanation prompts** at checkpoints (e.g., “Why is the first-time, full-time cohort chosen for this section?”) (LO1)
* **Reflection tasks**: “What practices do you already use to ensure accuracy in your reporting? How could these be applied here?” (LO3)
* Generative tasks include:
  + **Categorization**: Match data field names with their definitions
  + **Comparison**: Analyze two sample submissions to identify flaws
  + **Summarization**: Learners summarize review and lock procedures
* Schema-building tools:
  + Concept maps
  + Process diagrams for learners to complete (LO1, LO3)

**Embedded Assessment Elements**:

* Drag-and-drop field classification
* Highlight-the-error activities using screenshots
* Peer review of example entries in small-group breakout or discussion forums

**4. Practice and Assessment *(Directly Measures LO1, LO2, LO3)***

**Delivery and Format**:

* **Formative Assessments** (throughout modules):
  + Mini-quizzes and simulations after each topic
  + Interactive polls or matching exercises
  + All formative assessments provide **real-time feedback**, explaining why each answer is correct/incorrect
* **Summative Assessment**:
  + **Final IPEDS Simulation Task**:
    - Learners complete a mock Graduation Rates survey with dummy data
    - Includes intentional data anomalies to test review and error-identification skills (LO3)
    - Administered in a sandboxed survey platform or via an interactive form
* **Scoring Criteria**:
  + Completion accuracy (correct values entered)
  + Error flagging and rationale (learner explains why/how corrections were made)
  + Adherence to correct steps for submission (e.g., verification before locking)

**Feedback Delivery**:

* Automated where possible (e.g., in LMS quizzes)
* Optional instructor review for final simulation with **qualitative feedback** on:
  + Data accuracy
  + Logic of review process
  + Areas needing reinforcement

**5. Conclusion and Performance Support *(Reinforces LO1, LO2, LO3)***

**Strategies**:

* Recap the three types of cognitive load and how the training was designed to manage them
* Provide **performance support tools**:
  + A printable **step-by-step checklist**
  + A downloadable **reference guide of data definitions**
  + An editable **institution-specific SOP template**
* Final reflection prompt: “Which step of the survey process will you prioritize more carefully after this training, and why?” (LO3)

**EXPLANATION OF INSTRUCTION**

This instructional design is grounded in the principles of **Cognitive Load Theory**, focusing on how instruction can manage working memory by **reducing extraneous load**, **simplifying intrinsic load**, and **maximizing germane load**. These strategies support accurate and efficient IPEDS survey completion by helping learners focus on key tasks and develop good mental models. The lesson begins by **reducing extraneous load** through **clean visuals**, **streamlined navigation**, and **multimedia principles** such as **coherence** and **signaling**. This ensures that learners’ attention remains on the most important steps in the IPEDS process without being distracted by irrelevant content.

**Intrinsic load is simplified** by **segmenting** complex tasks, **pre-training** key concepts**,** and providing **scaffolds** such as **worked examples** and **step-by-step guides**. These strategies help learners, especially novices, progress through the survey process without cognitive overload. **Germane load is maximized** by including **reflection prompts**, **self-explanation activities**, and **generative learning tasks** like **categorization**, **comparison**, and **summarization**. Learners are encouraged to **construct meaningful schemas** by making connections to prior knowledge and solving realistic problems. A **final survey simulation** with **review checkpoints** allows learners to demonstrate their learning through applied performance. Each learning objective is addressed through carefully aligned strategies: identifying process steps (LO1), accurate data entry (LO2), and error-checking before submission (LO3).

A pair of rubber boots with crossed paddles

AI-generated content may be incorrect.

Oar and Rubber Boot

Theory name: Robert Gagne’s 9 Events of Instruction

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* Robert Gagné (Foundational Theorist)
  + Worked in military training
  + Published Conditions of Learning
    - Different domains require different approaches
    - Nine Events of Instruction
  + Contributed to bridging the gap between behaviorist and cognitivist theories
* Other theorists who later built upon this theory:
  + David Merrill
    - Component Display Theory
  + Jon A. Smith & Patricia L. Ragan
    - Instructional Design Theory
  + Jeroen Van Merriënboer
    - 4C/ID model of instructional design

FUNDAMENTAL ASSUMPTIONS

* Not all learning is equal
  + Learning differs by domain and instruction should match the domain
* Learning occurs through internal cognitive processes
  + Each one is needed for effective learning to occur
* Learning is sequential and steps build naturally upon each other
  + Moves from simple to more complex as the learning develops
* There are nine external instructional events that align to the necessary internal cognitive processes
  + Gain Attention, Inform the Learner of the Objectives, Stimulate Recall of Prior Knowledge, Present Stimulus Material, Provide Guidance, Elicit Performance, Provide Feedback, Assess Performance, Enhances Retention and Transfer
* These nine events fall into 3 main stages: preparatory, acquisition/practice of new knowledge/skills, and further application of skills/concepts
  + Preparatory
* Structured instruction enhances learning efficiency and effectiveness

DESIGN PROCESS

The design process consists of addressing all nine events of instruction proposed by Gagné:

* Preparatory Stage
* Gain attention
  + Engage learners
* Inform learners of objectives
  + Clearly communicate what learners will learn and why
* Stimulate recall of prior knowledge
  + Connect new material to what learners already know
* Acquire and practice new knowledge/skills
* Present the stimulus material
  + Deliver new content
  + Structure based on the learning domain
* Provide learner guidance
  + Support through scaffolding
  + Provide examples
  + Use sound strategies
* Elicit performance
  + Allow learners to practice/apply new skills/knowledge
  + Provide a low-risk setting
* Provide feedback
  + Offer different types of feedback to support learning
* Assess performance
  + Use aligned assessments to evaluate learner ability to meet objectives
* Further application of skills/concepts
  + Enhance retention and transfer
    - Reinforce learning
    - Extend application
    - Encourage reflection

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design for IPEDS Survey Completion Training Using Gagné’s Nine Events of Instruction**

**Audience**: Postsecondary administrators or institutional research staff tasked with IPEDS Graduation Rates survey completion

**Learning Objectives**:

* **LO1**: Identify each step involved in completing the IPEDS Graduation Rates survey
* **LO2**: Accurately enter and review institutional data in the IPEDS system
* **LO3**: Apply correct review procedures and submit the survey for final lock

**Preparatory Stage**

**1. Gain Attention**

* **Strategy**: Start with a high-impact visual of a news article or government site showing how IPEDS data affects public perception and funding. Show a short, attention-grabbing video highlighting the real-world impact of incorrect data.
* **Purpose**: Trigger interest and establish relevance (supports LO1, LO2)

**2. Inform Learners of Objectives**

* **Strategy**: Present the learning objectives clearly using a slide:  
    
  + "By the end of this training, you will be able to…"
* **Activity**: Ask learners to predict what steps or challenges might be involved in completing the Graduation Rates survey.
* **Purpose**: Provide structure and context for what’s coming (supports LO1–LO3)

**3. Stimulate Recall of Prior Knowledge**

* **Strategy**: Facilitate a brief discussion or poll: “Have you ever entered compliance data before? What made it easier or harder?”
* **Activity**: Show a College Navigator screenshot of their institution’s public data and ask learners what data errors might imply.
* **Purpose**: Help learners connect new learning with existing mental models (supports LO2)

**Acquire and Practice New Knowledge**

**4. Present the Stimulus Material**

* **Strategy**: Introduce the survey process using a **step-by-step diagram**.
* **Format**: Segment content into 4 digestible modules:  
    
  1. Identifying the correct cohort
  2. Entering graduation data
  3. Reviewing for accuracy
  4. Locking and submitting
* **Purpose**: Deliver content logically and efficiently, tailored to skill-building (supports LO1, LO2)

**5. Provide Learner Guidance**

* **Strategy**:  
    
  + Narrated walkthrough of each IPEDS section
  + Annotated screenshots with tips
  + Decision trees for tricky scenarios (e.g., student exclusions)
* **Support Tools**: Checklists, job aids, field definitions handout
* **Purpose**: Scaffold learners through unfamiliar processes (supports LO2, LO3)

**6. Elicit Performance**

* **Strategy**: Practice completing a partial IPEDS survey section using **dummy data** after each content module.
* **Activity**: Scenario-based entries (e.g., “What should be entered here if a student withdrew after 90 days?”)
* **Purpose**: Build fluency in a low-stakes environment (supports LO2)

**7. Provide Feedback**

* **Strategy**:  
    
  + Immediate, automated feedback for knowledge checks
  + Instructor or peer feedback during practice activities
  + Highlight why correct/incorrect entries matter
* **Purpose**: Reinforce understanding, correct misconceptions (supports LO2, LO3)

**8. Assess Performance**

* **Strategy**: Final assessment = learners complete a mock Graduation Rates survey in full
* **Format**:  
    
  + Fillable form with built-in checks
  + Evaluated using a rubric (accuracy, completeness, adherence to process)
* **Purpose**: Confirm learners can independently apply knowledge (directly measures LO1–LO3)

**Further Application of Skills/Concepts**

**9. Enhance Retention and Transfer**

* **Strategy**:  
    
  + Assign a case study: learners must identify common IPEDS errors and explain how to correct them
  + Encourage learners to build their own SOP for survey preparation and review
  + Revisit the learning goals and reflect on progress
* **Follow-Up**:  
    
  + Job aid distribution
  + Invite to optional quarterly refreshers before reporting deadlines
* **Purpose**: Promote long-term retention and application across future reporting cycles (supports LO3)

**EXPLANATION OF INSTRUCTION**

This instructional design is grounded in **Gagné’s Nine Events of Instruction**, a sequenced framework that aligns external instructional strategies with internal cognitive processes to optimize learning. The lesson begins by **gaining learners’ attention** with real-world examples of how IPEDS data affects institutional reputation and funding. This is followed by a clear **statement of objectives**, giving learners a road map of what they will achieve (LO1–LO3). To **stimulate recall of prior knowledge**, learners reflect on their past experiences with data reporting and compliance, connecting their background to new IPEDS tasks.

Next, the instruction moves into the **acquire-and-practice phase**, where the IPEDS Graduation Rates survey process is presented in structured modules. Learners are **guided through the content** with annotated screenshots, checklists, and decision trees, providing the scaffolding needed to support understanding (LO2). Learners are then asked to **practice completing segments of the survey** using dummy data in a low-risk setting (LO2), followed by **targeted feedback** that highlights both correct logic and common pitfalls (LO3). Once confident, learners move on to a **summative performance assessment**, completing a full survey simulation using provided scenarios and a scoring rubric to measure accuracy and process alignment (LO1–LO3).

To conclude, the training supports **retention and transfer** by offering real-world case studies, opportunities for reflection, and tools learners can carry into their future work.

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Oar and Rubber Boot

Theory name: Bloom’s Taxonomy

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* Dr. Benjamin Bloom
  + Worked with a team of educational psychologists to develop Bloom’s Taxonomy in 1956
  + His work aimed to classify educational goals
  + He emphasized higher-order thinking in the classroom
* Lorin Anderson and David Krathwohl
  + Shifted terminology from noun-based categories to verb-based categories
  + Updated the hierarchy to better reflect modern understanding of learning

FUNDAMENTAL ASSUMPTIONS

* Learning occurs in a cognitive hierarchy
  + Learning is classified from lower order to higher order thinking skills (remember, understand, apply, analyze, evaluate, create)
  + Each level represents increasing complexity of cognitive skill required
  + Mastery is sequential: Learners must be capable of performing lower-order skills before progressing to higher-order ones
* Learning objectives must align with cognitive demands
  + Objectives should reflect the appropriate level of thinking required for the task
  + Instruction should be informed by where learners currently are in their understanding (i.e., based on learner analysis)

DESIGN PROCESS

The design process using Bloom’s Taxonomy supports the development of instructional objectives that are sequenced from simple to more complex when it comes to cognitive demand. The sequence is as follows:

1. Remember: Learners recall previously learned information. *Application: definitions, facts, flashcards, quizzes, etc.*
2. Understand: Learners interpret or explain ideas/concepts. *Application: discussions, summaries, concept maps, etc.*
3. Apply: Learners use information in new situations. *Application: case studies, simulations, real-world problem solving, etc.*
4. Analyze: Learners break information into parts to explore relationships. *Application: comparison charts, data analysis, reviews, etc.*
5. Evaluate: Learners justify a decision or course of action. *Application: debates, critiques, judgments, etc.*
6. Create: Learners produce new or original work. *Application: projects, proposals, designs, etc.*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design for IPEDS Survey Completion Training Using Bloom’s Taxonomy**

**Audience**: Postsecondary institutional researchers or administrative staff responsible for completing the Graduation Rates survey

**Learning Objectives**:

* **LO1**: Identify the key steps and data elements involved in completing the IPEDS Graduation Rates survey
* **LO2**: Apply the correct procedures for accurate data entry and review
* **LO3**: Evaluate the accuracy and completeness of survey data before submission

**Design Process (Sequenced by Bloom’s Taxonomy)**

**1. Remember (LO1)**

**Goal**: Learners will recall essential definitions and survey components.

* **Activity**:  
    
  + Flashcards and glossary terms (e.g., cohort exclusions, reporting period)
  + Infographic of the IPEDS Graduation Rates workflow
* **Assessment**:  
    
  + Multiple-choice quiz with instant feedback

**2. Understand (LO1, LO2)**

**Goal**: Learners will explain the purpose of each section and how the data contributes to institutional reporting.

* **Activity**:  
    
  + Matching: data elements ↔ their definitions or survey function
  + Discussion: “How does this survey influence institutional accountability?”
* **Assessment**:  
    
  + Short-answer comprehension check: explain what each major data element does

**3. Apply (LO2)**

**Goal**: Learners will input data correctly into mock survey fields using realistic scenarios.

* **Activity**:  
    
  + Fill out sections of a mock IPEDS survey based on fictional student records
  + Decision-making prompts during entry (“Should this student be excluded?”)
* **Assessment**:  
    
  + Submit mock data entry for review by instructor or automated feedback tool

**4. Analyze (LO3)**

**Goal**: Learners will identify discrepancies and potential errors in mock data sets.

* **Activity**:  
    
  + Compare flawed and accurate submissions
  + Error-spotting worksheet: “What’s wrong with this entry?”
* **Assessment**:  
    
  + Written analysis: identify and explain 3–5 common errors and how to fix them

**5. Evaluate (LO3)**

**Goal**: Learners will assess the completeness and accuracy of a peer’s mock IPEDS submission.

* **Activity**:  
    
  + Peer review activity using a rubric
  + Group feedback discussion: “What would you recommend changing?”
* **Assessment**:  
    
  + Completed review form with justification for suggested changes

**6. Create (Extra Credit)**

**Goal**: Learners will design a reusable tool to support their future IPEDS survey processes.

* **Activity**:  
    
  + Build a personal checklist or SOP (Standard Operating Procedure) for completing the Graduation Rates survey
  + Optional: Collaborate in teams to compare tools and share best practices
* **Assessment**:  
    
  + Submit the created tool for peer and/or instructor feedback
  + Reflective prompt: “How will this help you improve future reporting?”

**EXPLANATION OF INSTRUCTION**

This instructional design is grounded in **Bloom’s Taxonomy**, progressing learners from foundational recall to practical application, analysis, and higher-order evaluation. The training begins with **Remember** activities such as flashcards and definitions to introduce learners to key IPEDS terms and survey components (LO1). Learners then move into the **Understand** phase, where they connect those components to real-world context through matching activities and brief writing prompts that explain survey purpose (LO1, LO2).

At the **Apply** level, learners complete realistic survey entry tasks using dummy data, building fluency in correct data handling (LO2). They then move into **Analyze**, identifying and correcting common reporting errors, followed by **Evaluate**, where they critique and provide structured feedback on peer submissions (LO3). To extend learning and encourage ownership, learners reach the **Create** level by building a personalized checklist or SOP to support their future reporting efforts. Though not tied to a formal objective, this step ensures learners can transfer their knowledge into practical tools, enhancing retention and workflow consistency.

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Oar and Rubber Boot

Theorist name: Jean Piaget (Theory of Cognitive Development)

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* What were the key influences that shaped their thinking?
* Explain the main ideas or theories for which they are known.
* How does their theory impact instructional design?

**What were the key influences that shaped Piaget's thinking?**

Some key influences on Piaget’s work:

* His early scientific interests in biology and zoology, including publishing scientific papers as a child and earning a PhD in natural sciences
* His work in Paris with Alfred Binet developing intelligence tests, where he observed that younger children made different types of mistakes than older children
* A shift in psychology toward understanding internal cognitive processes and how knowledge is constructed through interaction with the environment

**Explain the main ideas or theories for which Piaget is known.**

Piaget is primarily known for his Theory of Cognitive Development, which describes how children's thinking evolves in four distinct stages as they interact with the world around them. His theory emphasizes that learning is an active, constructive process and occurs in sequential stages:

* Sensorimotor Stage (Birth–2 yrs): Learning through sensory experiences and motor actions; development of object permanence
* Preoperational Stage (2–7 yrs): Symbolic thinking and language emerge; thinking is egocentric and not yet logical
* Concrete Operational Stage (7–11 yrs): Logical thinking develops for concrete tasks; understanding of conservation and categorization
* Formal Operational Stage (11+ yrs): Abstract and hypothetical thinking emerges; reasoning becomes more sophisticated

Additionally, this sequence of stages has the following features:

* The stages always happen in the same order
* No stage is ever skipped
* Each stage is a significant transformation of the stage before it
* Each later stage incorporates the earlier stages

At a high level, Piaget’s theory helped shift education toward learner-centered approaches and provided a developmental framework for designing age-appropriate instruction.

**How does Piaget's theory impact instructional design?**

Piaget’s theory impacts instructional design in several ways:

* **Aligns content with developmental stages**: Instruction matches cognitive abilities. *Application: use manipulatives in math for concrete operational learners, and introduce abstract algebra concepts only in the formal operational stage*
* **Promotes learner-centered design**: Designs focus on how students construct knowledge. *Application: letting students explore cause and effect in a science simulation rather than just watching a video*
* **Encourages discovery and exploration**: Learning is built around active engagement. *Application: preschoolers use sorting games to understand classification instead of being told rules*
* **Supports stage-appropriate technology use**: Tools are chosen based on developmental readiness. *Application:* Khan Academy Kids *story time prompts preoperational children to describe and predict story events*
* **Builds on prior knowledge**: New content is scaffolded based on what learners already understand. *Application: relating a lesson on ecosystems to students’ previous knowledge of animals and plants*
* **Applies constructivist principles**: Learning environments emphasize hands-on construction of meaning. *Application: project-based learning where students build models or create presentations to explain what they've learned*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *AS IF YOU WERE THIS THEORIST.*  Include a paragraph that explains your design choices on behalf of this theorist.

**Instructional Design: IPEDS Training for Preoperational Stage Learners (by Jean Piaget)**

**Target Developmental Stage: Preoperational (Ages 2–7)**

**Learning Objectives**

1. Learners will name the parts of an IPEDS survey form using visual prompts.
2. Learners will match each part of the IPEDS survey with a picture that shows what it does.

**Lesson Outline**

**1. Introduction (5 min) – Set the Stage with a Story**

* Begin with a short puppet story: "Penny the Penguin Prepares a Report!"
* Penny gets a big envelope called an “IPEDS form,” but she doesn’t know what’s inside.
* She asks the class to help her find out what the different parts of the form mean.

*Supports symbolic learning and role play; sets context using a relatable character.*

**2. Objective 1 Instructional Activity – Name the Parts (15 min)**

* Show learners a large, colorful printout of a pretend “IPEDS Form” with labels:
  + “Student Numbers”
  + “Faculty List”
  + “Program Types”
* Use finger puppets or stickers to represent each section.
* Learners repeat the names out loud as each section is pointed to.
* **Assessment (Objective 1):** Learners take turns pointing to each section and saying its name.

“Can you name this part for Penny?”

*Learning objective 1 is assessed through verbal recall and pointer play.*

**3. Objective 2 Instructional Activity – Matching Game (15 min)**

* Lay out laminated cards: 3 parts of the IPEDS survey + 3 matching images (e.g., students in a classroom, a professor with a name tag, pictures of certificates).
* Learners play a guided matching game in small groups.
* Teacher asks, “Which picture goes with the part that talks about people teaching?”
* **Assessment (Objective 2):** After practicing in groups, learners are given individual sets and asked to match each part of the IPEDS survey with the correct picture.

*Learning objective 2 is assessed through a tactile, visual game.*

**4. Review and Reinforcement (10 min)**

* Penny the Penguin returns and thanks the learners.
* Learners help Penny tape the pictures and names onto her IPEDS envelope.
* Instructor asks reflective, reinforcing questions:

“What part did we name with all the students?”  
“Can you match the one that tells about what teachers do?”

**Conclusion**

This lesson follows Piagetian principles by aligning with the symbolic, visual, and experiential needs of preoperational learners. It builds understanding through imitation, play, and interaction with concrete materials, helping learners form mental schemas of basic IPEDS survey components. Assessment activities ensure clear alignment with the learning objectives.

**EXPLANATION OF INSTRUCTION**

This lesson is built around Piaget’s **Theory of Cognitive Development**, focusing on how young learners in the **Preoperational Stage** think and learn. Since kids at this stage learn best through pictures, play, and talking things out, the lesson design plays to those strengths. We introduced IPEDS with a puppet character named “Penny the Penguin,” using **symbolic play** and **storytelling** to make a pretty abstract idea feel more concrete and fun. Penny helps walk the learners through what each section of the survey is about, using simple language and clear visuals.

We used s**ymbolic representation** by connecting each part of the IPEDS survey to an image, like a schoolhouse for institutional info or a stack of books for program data, so learners can start to **name** and recognize them. They get to show what they’ve learned in a **matching activity** where they **identify** and pair images with their names. It’s hands-on, playful, and just right for how learners at this age make sense of new things. We also built in chances for repetition and discussion to help ideas stick, which matches how their thinking is still developing and benefits from hearing and seeing things multiple times.

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Oar and Rubber Boot

Theorist name: Jerome Bruner (Constructivist Learning Theory)

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* What were the key influences that shaped their thinking?
* Explain the main ideas or theories for which they are known.
* How does their theory impact instructional design?

**What were the key influences that shaped Bruner’s thinking?**

Some key influences on Bruner’s work:

* His early academic career during the Great Depression sparked an interest in human development and psychology
* His exposure to behaviorism during his studies, but a stronger pull toward cognitive psychology and the works of Piaget and Vygotsky
* His view of learning as an ongoing process

**Explain the main ideas or theories for which Bruner is known.**

Bruner is best known for his Constructivist Learning Theory, which emphasizes that learners actively construct knowledge through exploration and inquiry rather than passively receiving information. His major contributions include:

* **Three Modes of Representation**: Explains how learners process and store information
  + Enactive (action-based)
  + Iconic (image-based)
  + Symbolic (language-based)
* **Spiral Curriculum**: Learners revisit concepts repeatedly, each time at a deeper level of complexity and abstraction
* **Scaffolding:** Teachers provide temporary support to learners, gradually reducing assistance as learners gain mastery
* **Discovery Learning:** Learners find solutions to problems through exploration
* **Inquiry-Based Learning**: Learners actively explore questions, problems, or scenarios rather than simply being presented with facts
* **The Role of Social and Cultural Interaction:** A learner’s interaction with peers, educators, and their cultural environment help shape their cognitive development

Bruner’s work helped to shift educational theory toward student-centered, inquiry-driven instruction and laid the groundwork for many modern instructional design practices.

**How does Bruner’s theory impact instructional design?**

Bruner’s theory impacts instructional design in several ways:

* **Introduces the Spiral Curriculum**: Foundational concepts are taught early and revisited in more complex forms over time. *Application: in a science curriculum, students first explore basic plant biology in elementary school, then learn about cellular processes in middle school, and photosynthesis equations in high school*
* **Promotes discovery learning**: Learners actively construct knowledge through exploration. *Application: instead of being told how circuits work, students build simple ones and test different setups to discover how current flows*
* **Encourages inquiry-based, problem-solving tasks**: Students are presented with real-world challenges and asked to explore solutions. *Application: in a construction class, learners analyze flawed wall frames before learning formal building standards*
* **Promotes collaborative and hands-on learning:** Group work and projects foster active engagement. *Application: teams build model bridges and test weight capacity, learning engineering principles through doing*
* **Supports scaffolding and gradual release**: Teachers provide structured support, then gradually remove it as learners gain competence. *Application: an instructor models solving a math problem, then provides hints as students try on their own, eventually letting them work independently*
* **Centers instruction on the learner**: Emphasizes personalized and student-driven learning. *Application: students choose their own STEM project topic to explore, allowing them to connect with the material in meaningful ways*
* **Supports critical thinking and metacognition**: Learners are encouraged to reflect on their thinking and problem-solving process. *Application: after solving a problem, students explain how they approached it and what they would do differently next time*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *AS IF YOU WERE THIS THEORIST.*  Include a paragraph that explains your design choices on behalf of this theorist.

IPEDS Survey Training – Bruner’s Constructivist Learning Theory (Symbolic Representation)

Target Learners: Postsecondary administrators responsible for IPEDS reporting

Learning Objectives

By the end of this training, participants will be able to:

1. Define key IPEDS terms used in the Institutional Characteristics (IC) and Fall Enrollment (EF) survey sections.
2. Classify institutional data according to official IPEDS categories.
3. Complete selected portions of the IPEDS survey using provided institutional data.

Lesson Plan Overview

*1. Activate Prior Knowledge – IPEDS Language Warm-up* (10 minutes)

To begin, learners participate in a brief matching activity where they connect familiar institutional terms (e.g., "first-year," "transfer student," "online course") with official IPEDS definitions. This serves as a bridge between their day-to-day understanding and the formal symbolic language of IPEDS.  
In small groups, they briefly discuss the question:  
“Why does it matter if we say ‘first-time’ versus ‘first-year’?”  
This sets the stage for understanding that precise terminology is foundational for consistent federal reporting.

*2. Direct Instruction – Understanding IPEDS Terminology* (15 minutes)

The instructor introduces a curated list of 6–8 high-impact IPEDS terms (e.g., "first-time student," "degree-seeking," "cohort," "distance education"). For each term, learners are given:

* A plain-language definition
* A real-world institutional example
* A fill-in-the-blank sentence to reinforce usage

Example:

“A \_\_\_\_\_\_\_\_\_\_\_\_\_\_ student is enrolled in credit courses for the first time at this institution and has no prior postsecondary experience.”  
Answer: **First-time**

**Measurement of LO1 –** Define: These fill-in-the-blank prompts and short-answer exercises directly assess learners’ ability to define IPEDS terminology in their own words and apply the terms in context.

*3. Classification Challenge – Sorting Student Scenarios* (15 minutes)

Learners are presented with five mock student profiles that include brief demographic and enrollment details (e.g., “Maria, 18, enrolled in 12 credit hours, no prior college experience”).

Their task:

* Use the IPEDS glossary and handouts to classify each student into correct IPEDS categories: full-time/part-time, first-time/transfer, degree-seeking/non-degree-seeking, etc.
* Share responses with a partner and discuss any discrepancies.

**Measurement of LO2 –** Classify: Learners demonstrate their ability to classify data according to formal IPEDS standards, applying symbolic language to realistic examples.

*4. Application Task – Completing Survey Fields* (20 minutes)

Using a worksheet that replicates sections of the Fall Enrollment and Institutional Characteristics surveys, learners are grouped into pairs. They are given a set of mock institutional data and tasked with completing select IPEDS survey items using proper terminology and codes.

Example fields might include:

* Enrollment by attendance status and level
* Program offerings and distance education availability
* Admissions or tuition fields, depending on context

After completing their entries, learners will compare with an “answer key” that provides rationales behind each response, reinforcing understanding and correcting misconceptions.

**Measurement of LO3 –** Complete: Learners are evaluated on their ability to complete IPEDS survey sections accurately using symbolic information and institutional data inputs.

*5. Reflect and Debrief – Making Meaning* (10 minutes)

To wrap up, learners engage in a short facilitated reflection.  
Discussion prompts include:

* “Which IPEDS terms or categories felt the most confusing at first?”
* “How does mastering the language of IPEDS affect our ability to report accurately?”

Learners are invited to write one “aha moment” from the session on a sticky note or in a shared digital space to reinforce takeaway learning.

**EXPLANATION OF INSTRUCTION**

This lesson is grounded in **symbolic representation**, one of Bruner’s core concepts of learning. The training focuses on helping learners understand and work with the formalized, abstract language used in IPEDS reporting. The lesson begins by **activating prior knowledge**, bridging familiar campus terminology with official federal terms to create a conceptual foundation. Then, learners engage with new terminology through **guided instruction**, short-response prompts, and real-world examples. This allows them to **define** terms in both symbolic and practical ways.

Next, the instruction moves into applied meaning-making as learners **classify** mock student data using the correct IPEDS categories. Finally, learners **complete** actual excerpts of the IPEDS survey using symbolic codes and definitions. This applied task reflects Bruner’s emphasis on learning through interaction with structured symbols, encouraging learners to internalize language through use. The **reflection** at the end reinforces schema construction and helps solidify how symbolic accuracy leads to effective survey reporting. The lesson uses the symbolic representation not only to convey knowledge but to enable learners to perform the tasks they will encounter in their roles with confidence.

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Oar and Rubber Boot

Theorist name: David A. Kolb (Experiential Learning Theory)

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* What were the key influences that shaped their thinking?
* Explain the main ideas or theories for which they are known.
* How does their theory impact instructional design?

**What were the key influences that shaped Kolb’s thinking?**

Some key influences on Kolb’s work:

* John Dewey’s belief that learning is fundamentally experiential and requires interaction with subject matter
* Kurt Lewin’s ideas on learning as a social and environmental process shaped by one’s context and interactions
* Jean Piaget’s model of cognitive development and the idea that knowledge is constructed sequentially, from concrete to abstract thinking

**Explain the main ideas or theories for which Kolb is known.**

Kolb is best known for Experiential Learning Theory, a cyclical model that outlines how people learn through experience. Learning in this model moves through four continuous stages:

* Concrete Experience: Learning begins with a hands-on or lived experience
* Reflective Observation: The learner reflects on the experience and notices patterns
* Abstract Conceptualization: The learner draws conclusions, forms generalizations, or constructs theories
* Active Experimentation: The learner applies the new understanding in new situations, testing out ideas

Other main ideas emphasized by Kolb:

* The learning cycle outlined above is influenced by constructivism
  + Learners build knowledge by doing, reflecting, and applying.
* Teachers serve as facilitators
  + They guide students through experiences, encouraging reflection, and provide opportunities for application

**How does Kolb’s theory impact instructional design?**

Kolb’s theory impacts instructional design in several ways:

* **Follows the Experiential Learning Cycle**: Instruction is designed around a four-stage cycle: learners engage in a concrete experience, reflect on it, form abstract concepts, and then experiment with those concepts. *Application:  in a finance simulation, students brainstorm a business, analyze survey results, learn budgeting principles, and run the business*
* **Emphasizes learning through real-world experiences**: Instruction includes real-world tasks like simulations, role-plays, and case studies. *Application: students plan and operate a school business to understand budgeting, decision-making, and financial literacy*
* **Promotes reflection**: Students are given time and guidance to think critically about their experiences. *Application: after conducting peer surveys, students reflect on how their data impacts product design and pricing*
* **Supports problem-based and inquiry-based learning**: Learners explore open-ended problems to develop deeper understanding. *Application: students solve marketing and inventory issues in their business, developing practical problem-solving skills*
* **Encourages hands-on, student-centered learning**: Instruction is active and engaging, placing students in the role of decision-makers. *Application: students choose their business concept and make key budgeting decisions, increasing ownership and motivation*
* **Uses scaffolding:** Teachers guide students through each stage of the learning cycle. *Application: students are taught budgeting before they apply it in their business plan, and the teacher provides check-ins as the students run their businesses*
* **Allows for experimentation**: Students apply what they learn, reflect, and adjust. *Application: after one week of sales, student groups evaluate their success and revise strategies to improve outcomes*
* **Connects theory to practice**: Learners apply abstract concepts to real-world actions. *Application: students don’t just learn about profit margins in theory; they calculate and apply them in a real business simulation*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *AS IF YOU WERE THIS THEORIST.*  Include a paragraph that explains your design choices on behalf of this theorist.

Instructional Design: IPEDS Survey Completion Using Kolb’s Experiential Learning Theory

**Focused Strategies: Concrete Experience & Active Experimentation**Target Learners: Postsecondary administrators responsible for IPEDS reporting

Learning Objectives

By the end of this training, learners will be able to:

1. Identify the required components and deadlines of the IPEDS survey.
2. Complete a mock IPEDS data entry task using provided institutional data.
3. Revise submitted survey entries based on feedback and peer discussion.

I. Concrete Experience

*A. Kickoff Case Study:* “Meet Riverview Community College”

* Learners are introduced to a fictional community college with:
  + Institutional profile and background narrative
  + Organizational chart showing reporting roles
  + Internal coordinator notes
  + Sample calendar of deadlines
* Learners annotate:
  + A digital reporting calendar
  + An internal checklist for upcoming IPEDS responsibilities
* **Assessment (LO1)**:  
  Learners identify core IPEDS components and reporting deadlines by completing a checklist and calendar activity based on the case materials.

*B. Walkthrough of Past Reporting Errors*

* Learners review three anonymized examples of IPEDS submission mistakes:
  + Description of what went wrong
  + Original data and corrected versions
  + Supporting references to IPEDS instructions
* Small-group task:
  + Identify key reporting elements that were misused (e.g., staff categories, enrollment timing)
  + Suggest accurate revisions using official IPEDS definitions
* **Assessment (LO1)**:  
  In a collaborative worksheet, learners identify three required components that were misreported and propose appropriate corrections.

II. Active Experimentation

*A. Mock IPEDS Submission Task*

* Each learner is assigned a simplified IPEDS section (e.g., Fall Enrollment or Finance)
* Using a mock dataset from Riverview’s internal records:
  + Learners independently **complete** an interactive form resembling the IPEDS platform
  + Learners may reference the IPEDS data dictionary and help guide as needed
* **Assessment (LO2)**:  
  Learners complete their assigned IPEDS survey section and submit it for peer feedback.

*B. Peer Review & Feedback Loop*

* Peer assignments:
  + Each learner is assigned a partner’s mock submission
  + Use a structured rubric aligned with IPEDS standards
* Feedback tasks:
  + Review formatting, data accuracy, and terminology use
  + Provide constructive written comments
* Follow-up:
  + Partner pairs discuss the feedback in brief one-on-one breakout sessions or in a guided discussion forum
  + Learners **revise** their original submissions based on feedback and rubric standards
* **Assessment (LO3)**:  
  Learners revise their submitted work and resubmit final versions for instructor review.

*C. Final Reflection (Optional Extension)*

* Prompt:  
  *“What parts of the IPEDS reporting process felt most intuitive? Which steps would benefit from additional tools or clarity?”*
* Submission:
  + Learners submit a short written reflection or voice memo
  + Opportunity to consolidate learning and recommend improvements for future practice

**EXPLANATION OF INSTRUCTION**

This instructional design is grounded in David Kolb’s Experiential Learning Theory, with a focus on **Concrete Experience** and **Active Experimentation**. The lesson begins by immersing participants in a fictional but realistic institutional scenario (Riverview Community College). This **Concrete Experience** gives learners a hands-on starting point by allowing them to explore institutional profiles, key deadlines, and documentation used for reporting. Instead of beginning with abstract definitions, learners interact with recognizable, context-specific materials to uncover IPEDS components and reporting structures. This supports the learning objective where they **identify** key terms and reporting cycles.

From there, the instruction shifts to **Active Experimentation**, where learners directly apply what they’ve learned. Using a simplified dataset, participants work through the process of **completing** a mock IPEDS survey. Afterward, they **revise** their submission based on structured peer feedback. This trial-and-error application allows learners to reflect on their decisions and improve their accuracy in a safe, collaborative setting. By moving from realistic experience to hands-on problem solving, the lesson ensures that learners not only understand IPEDS requirements, but are also better prepared to perform these tasks independently in the workplace.

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AI-generated content may be incorrect.

Oar and Rubber Boot

Theory name: Schema Theory

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* Frederic Bartlett
  + Cambridge psychologist
  + Introduced the concept of schemas through his research on memory reconstruction
  + Credited with serial reproduction, later known as schema theory
* Jean Piaget
  + Swiss psychologist
  + Expanded schema theory by incorporating assimilation and accommodation into his theory on child and adolescent cognitive development
* Marvin Minsky
  + Computer scientist
  + Brought schema theory into artificial intelligence, introducing frames to represent knowledge
* Richard Anderson
  + Applied schema theory to education, particularly in reading and language development

FUNDAMENTAL ASSUMPTIONS

* Knowledge is organized in mental structures called schemas, which store related concepts and experiences
* We do not learn isolated facts, we organize knowledge into mental frameworks
* Prior knowledge plays a crucial role in how new information is interpreted, understood, and remembered
  + Existing schemas influence perception, memory, and thought
* Learning occurs through the active adaptation of schemas by
  + Assimilation (fitting new information into existing schemas)
  + Accommodation (modifying schemas to integrate new information)
  + Equilibrium (state of cognitive balance)
* Schemas are dynamic, evolving over time through experience. They become more complex and sophisticated over time.
* Comprehension and memory are reconstructive processes, guided by existing schemas that influence attention, interpretation, and recall
* Schemas shape our perception of the world and behavior

DESIGN PROCESS

Instructional design based on schema theory includes the following strategies:

* **Activate Prior Knowledge**: Help learners connect new information to what they already know. *Application****:*** *Use pre-assessments, discussions, brainstorming, etc. to prompt learners to recall relevant prior knowledge.*
* **Organize Content**: Use logical structuring that segments content into manageable, progressive learning blocks. *Application: Break up lessons into small chunks of information. Design scaffolded modules with visual cues and formative assessments to support retention and sequencing.*
* **Facilitate Schema Development:**  Guide learners in forming and refining mental frameworks through meaningful connections. *Application: Use real-world examples, analogies, and opportunities to help learners relate new information to what they already know.*
* **Support Assimilation and Accommodation:**  Encourage learners to integrate new information or modify existing schemas when discrepancies arise. *Application: Present challenges, misconceptions, or problem-based tasks that prompt reflection and cognitive adjustment. Design interactive learning experiences (e.g. hands-on tasks, group work) that promote cognitive flexibility.*
* **Reinforce and Apply Schemas:** Strengthen schema retention through opportunities to practice and transfer knowledge across contexts. *Application: Include reflection, problem-solving tasks, real-world application activities, and instructor-led discussions that allow learners to evaluate and transfer their schemas to new contexts.*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *AS IF YOU WERE THIS THEORIST.*  Include a paragraph that explains your design choices on behalf of this theorist.

**Instructional Design Plan: IPEDS Survey Training Using Schema Theory**

**1. Learning Objectives**

By the end of this training, participants will be able to:

* **Identify** the major sections and components of the IPEDS survey.
* **Categorize** institutional data into the appropriate IPEDS reporting sections.
* **Compare** their pre-existing understanding of IPEDS reporting to newly acquired knowledge structures.

**2. Schema Theory in Action**

**Prior Schemas**:  
Participants may enter the training with pre-existing schemas related to:

* Institutional data management,
* Use of Excel or reporting software,
* Regulatory requirements from past compliance experience.

**Instructional Influence on Schemas**:

* The training will activate these schemas through contextual examples and advance organizers.
* It will modify and buildnewschemas by offering corrected frameworks for organizing IPEDS data.
* Misconceptions—such as assuming data used in other federal reports are always identical to IPEDS definitions—will be explicitly addressed through contrastive examples.

**Schema Theory Application**:  
Grounded in the work of Bartlett (schematic memory), Piaget (assimilation and accommodation), Minsky (frame-based understanding), and Anderson (schema refinement), this training leverages prior knowledge while guiding learners to reorganizeandelaborate their cognitive structures for more efficient and accurate IPEDS reporting.

**3. Instructional Strategies**

* **Advance Organizers**: A visual map of the IPEDS survey structure provided at the start of training.
* **Analogies and Examples**: Comparisons between familiar data reports and IPEDS (e.g., comparing accreditation reporting to IPEDS timing and definitions).
* **Chunking and Categorization**: Grouping survey components into logical domains (e.g., Enrollment, Finance, Outcomes).
* **Schema Strengthening**: Repetition of core reporting concepts using multiple representations (charts, practice entries, role play).

**4. Learning Activities**

* **Interactive**: Learners complete a drag-and-drop activity where they must **identify** key terms and place them in the correct survey sections (assesses *identify*).
* **Constructive**: Small groups receive fictional data sets and are asked to **categorize** each piece of information into the correct part of the IPEDS survey. They will explain their reasoning to peers and receive feedback (assesses *categorize*).
* **Reflective**: Learners complete a journal prompt: “How did your understanding of IPEDS reporting change during this training? Which assumptions were corrected?” They will be prompted to **compare** old and new schema (assesses *compare*).

**5. Assessment Methods**

**Formative Assessments**:

* Knowledge checks (multiple choice and matching) used throughout the training to **identify** components of the survey correctly.
* Guided discussion and polling to **compare** participant assumptions with best practices.

**Summative Assessments**:

* Learners will **construct** a simplified IPEDS report using mock data and submit it for evaluation.
* Within the summative project, they will **categorize** all provided data fields into correct IPEDS sections and provide a short justification.
* A post-activity reflection will again ask learners to **compare** their current and prior understanding, reinforcing the reflective cycle of schema development.

**6. Evaluation of Training Impact**

* **Post-training survey** to measure perceived schema clarity and reporting confidence.
* **Accuracy audit** comparing mock submissions to the expected output.
* **Pre- and post-training schema maps**: Participants will draw concept maps of the IPEDS survey before and after training to visually demonstrate schema development and integration.
* Long-term: Monitor error rates or correction cycles in IPEDS submissions following training to evaluate real-world transfer of schema.

**EXPLANATION OF INSTRUCTION**This training on IPEDS survey completion is built around **Schema Theory**, recognizing that adult learners come with prior experiences and mental frameworks related to data, reporting, and institutional systems. To support effective learning, the lesson begins by **activating prior knowledge** through reflective prompts and advance organizers that connect IPEDS concepts to familiar reporting tasks. The content is **organized into progressive, manageable segments** aligned with the structure of the IPEDS survey itself. Learners are guided through **scaffolded** modules that include **chunking and categorization** of data types, helping them visualize and internalize how institutional information fits into each reporting section.

The training **facilitates schema development** by using **real-world analogies**, **interactive classification activities**, and **concept mapping tasks** that require learners to apply their understanding in context. Learners are also presented **misconceptions and problem-based scenarios** to encourage **schema accommodation**, allowing learners to refine or restructure inaccurate mental models. Learners are then given opportunities to **reinforce and apply schemas** through hands-on practice with mock data, reflective journaling, and a summative project that mirrors actual IPEDS tasks. These strategies promote meaningful connections, long-term retention, and confident application of IPEDS concepts in the workplace.

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Oar and Rubber Boot

Theory name: Vygotsky’s Sociocultural Theory

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* Lev Vygotsky
  + The primary theorist behind Sociocultural Theory
  + Interest in psychology shaped by intellectual environment in Russia
* Alexander Luria and Alexei Leontiev
  + Collaborated with Vygotsky to help further develop Vygotskian approach to psychology
* Barbara Rogoff, James Wertsch, Michael Cole, Vera John-Steiner, and James Lantolf
  + Later scholars who have extended and applied Vygotsky’s work in educational contexts

FUNDAMENTAL ASSUMPTIONS

* Learning is inherently social and cultural
  + Development originates in social interaction and is shaped by cultural contexts
* Language is central to learning
  + It mediates thought and meaning-making through social communication
* Cognition develops through interaction
  + Knowledgeable others (e.g., peers, teachers, caregivers) play a key role
* The Zone of Proximal Development (ZPD)
  + ZPD identifies the gap between what a learner can do independently and what they can achieve with guided help
  + Learning occurs most effectively within this zone
* Scaffolding is essential
  + Learners need tailored support that is gradually removed as competence increases

DESIGN PROCESS

Instructional design based on Vygotsky’s Sociocultural Theory includes the following strategies:

* **Diagnose learners’ current abilities**: Identify each learner’s Zone of Proximal Development (ZPD) to tailor instruction just beyond their independent level. *Application: Use formative assessments, observational check-ins, or reflective prompts to determine what learners can do alone and where support is needed.*
* **Create Socially Interactive Learning Environments**: Learning is co-constructed through interaction, collaboration, and shared experiences. *Application: Design group projects, dialogue-based activities, peer collaboration, and think-pair-share opportunities to engage learners in active, socially mediated learning.*
* **Incorporate Culturally Relevant Content**: Cognitive development is shaped by cultural experiences and values. *Application: Integrate learners’ backgrounds, funds of knowledge, and community-based examples to connect instruction to real-life contexts and deepen meaning.*
* **Provide Scaffolding**: Scaffold tasks to help learners progress from guided participation to independence. *Application: Model strategies, provide guided practice, and gradually fade support as learners gain mastery. Adjust help based on individual need within the ZPD.*
* **Encourage Language Use as a Cognitive Tool**: Language mediates thinking and supports conceptual development. *Application: Promote discussion, verbal reasoning, academic talk, and structured reflection activities to help learners articulate and internalize new ideas.*
* **Foster Cognitive Apprenticeships**: Learners develop understanding through guided participation in authentic, expert-modeled activities. *Application: Use modeling, coaching, and real-world problem solving—such as labs, simulations, or collaborative projects—to support learners as they grow from novice to expert.*
* I**ntegrate Third-Space Learning Opportunities**: Effective instruction bridges informal (home/community) and formal (school) learning spaces. *Application: Design tasks that allow students to bring their personal experiences into the academic setting—such as cultural storytelling, journaling, or community-based inquiry—to enrich engagement and support deeper learning.*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design Plan: IPEDS Survey Training Using Vygotsky’s Sociocultural Theory**

**1. Learning Objectives**

By the end of this training, participants will be able to:

* **Collaborate** with peers to interpret and complete components of the IPEDS survey.
* **Explain** the purpose and structure of the IPEDS survey to a colleague using institutional language and examples.
* **Apply** institutional data appropriately within IPEDS reporting categories through guided group work.

**2. Vygotsky’s Sociocultural Theory in Action**

This training is grounded in the belief that learning is a **socially constructed process**, mediated by language, cultural context, and interaction with others. IPEDS reporting is not simply a task of data entry but a culturally situated activity that requires a shared understanding of institutional norms, tools, and expectations.

Participants will learn within their **Zone of Proximal Development (ZPD)**—the space where they can perform tasks with support from **More Knowledgeable Others (MKOs)**. Facilitators will guide the learning through **scaffolding** techniques such as modeling report completion, prompting with guiding questions, and providing structured templates. Language-rich interactions (group dialogue, peer instruction, and collaborative reflection) will serve as the primary mechanism for constructing knowledge.

**3. Instructional Strategies**

* **Collaborative Learning**: Learners are placed in pairs or small groups for discussions and exercises involving real-world IPEDS tasks.
* **Scaffolding**: Facilitators provide **guided walkthroughs**, **data entry templates**, and real-time feedback as learners complete activities.
* **Dialogue and Co-construction**: Facilitated discussions and peer explanation tasks will help learners **explain** survey logic and structure using institutional terminology.
* **Cultural Tool Use**: Learners will use actual IPEDS reporting software, data dictionaries, and reporting calendars to mediate understanding and simulate authentic work environments.

**4. Learning Activities**

* **Think-Pair-Share** (assesses *explain*): Participants reflect on how they currently approach reporting, then pair up to articulate the function and structure of the IPEDS survey.
* **Group Simulation** (assesses *collaborate* and *apply*): Small groups receive mock institutional datasets and collaboratively complete different IPEDS survey sections using a shared reporting platform. Each group presents their process to peers and justifies their categorization decisions.
* **Facilitator Modeling** (supports *apply*): The instructor walks through a sample reporting scenario, narrating decisions and inviting questions.
* **Guided Practice** (supports *collaborate*): Pairs rotate through stations focused on different survey sections, with embedded facilitator prompts to scaffold learning.

**5. Assessment Methods**

**Formative Assessments**:

* Peer teaching activity where each learner must **explain** one IPEDS survey section to a partner using common institutional language.
* Facilitator check-ins during group simulations to assess how learners **collaborate** and clarify misunderstandings in real time.

**Summative Assessment**:

* Each group completes a mock IPEDS submission for a fictional institution. Groups must **apply** institutional data accurately and **collaborate** to justify where and how data points were placed. The project is submitted with a short group reflection on the experience.

**6. Evaluation of Training Impact**

* **Post-training feedback surveys** ask learners to evaluate how well collaboration and support helped them understand the IPEDS process.
* **Facilitator observation checklists** track levels of learner engagement, support needs, and successful scaffold removal during tasks.
* Optional **follow-up survey** 2–4 weeks after training to assess whether the social learning model helped learners transfer skills to real reporting tasks.

**EXPLANATION OF INSTRUCTION**

This training is designed around **Vygotsky’s Sociocultural Theory**, which emphasizes that learning is inherently social and shaped by cultural tools, dialogue, and collaboration. Recognizing that IPEDS reporting is a complex institutional task often learned through mentorship and shared practice, the training creates space for participants to learn within their **Zone of Proximal Development (ZPD)**. Learners engage in **collaborative activities** where they draw on the support of **more knowledgeable others**, including facilitators and peers, to understand and apply IPEDS concepts. Through structured interactions like **think-pair-share**, learners use **language as a tool for meaning-making**, clarifying how survey sections function and how institutional data fits into each.

Instructional strategies include **scaffolding** in the form of facilitator-led walkthroughs, guided prompts, and templates to reduce cognitive load and support task completion. As learners gain confidence, scaffolds are gradually removed, promoting independence and fluency in IPEDS reporting. The training leverages **cultural tools**, such as reporting platforms and institutional terminology, to ground learning in real-world practice. By encouraging learners to **explain**, **collaborate**, and **apply** what they learn in authentic group tasks, the design not only supports skill development but also promotes a shared understanding of IPEDS as a collaborative institutional responsibility.

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Oar and Rubber Boot

Theory name: Leontiev’s Activity Theory

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* Lev Vygotsky
  + Provided the foundation for Activity Theory by highlighting the role of social and cultural context in cognitive development
* Alexei Leontiev
  + Developed Activity Theory further by focusing on the structure of human activity, highlighting goal-directed actions mediated by tools
* Sergei Rubinstein
  + Contributed to the philosophical and systemic aspects of human activity
* Yrjö Engeström (later contributor)
  + Expanded Activity Theory by developing the concept of a human activity system
  + Shaped its influence in Western educational and workplace contexts

FUNDAMENTAL ASSUMPTIONS

* Learning is socially and culturally mediated
  + It doesn’t happen in isolation but through participation in a community
* Human activity is goal-oriented and purposeful
  + Learning occurs through real-world tasks and is driven by shared objectives
* Tools mediate learning and shape cognitive development
  + Physical tools (e.g., software, whiteboards)
  + Symbolic tools (e.g., language, norms)
* Learning and development occur within a collective system
  + Subject (learner)
  + Object (goal)
  + Tools (materials)
  + Community (social context)
  + Rules
  + Division of labor (roles)
* Contradictions and tensions drive growth
  + Makes learning dynamic and adaptable

DESIGN PROCESS

Instructional design based on Activity Theory includes these strategies:

* **Identify the Activity System**: Define the subject (learner or group), object (goal of the activity), and intended outcome while mapping out tools, community, rules, and division of labor. *Application: Use planning frameworks or templates that help instructors analyze all components of the activity system before designing instruction.*
* **Design Context-Rich, Goal-Oriented Tasks**: Center learning around authentic, real-world problems that reflect the complexity of professional or community challenges. *Application: Use problem-based learning scenarios, case studies, or simulations that encourage learners to solve meaningful problems collaboratively.*
* **Integrate Mediating Tools**: Support cognitive processes with material and symbolic tools that shape and extend learning. *Application: Incorporate technology (e.g., collaborative platforms, simulation tools) and cognitive tools (e.g., graphic organizers, templates) that facilitate learner engagement and productivity.*
* **Facilitate Collaboration**: Promote interaction, shared responsibility, and knowledge co-construction within a learning community. *Application: Design group projects, online forums, peer feedback sessions, and role-based activities that require learners to negotiate, contribute, and rely on one another.*
* **Distribute Roles and Encourage Reflection**: Encourage role differentiation within groups and provide structured opportunities for metacognitive reflection. *Application: Assign rotating responsibilities (e.g., facilitator, researcher, presenter) and use journals, peer evaluations, and debrief discussions to help learners analyze their contributions and growth.*
* **Assess the System as a Whole**: Evaluate both individual and group learning by considering performance across the entire activity system. *Application: Use rubrics that assess tool use, collaboration quality, goal achievement, and learner growth. Do this both independently and collectively.*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Plan: IPEDS Survey Completion Training**

**Target Audience:** Postsecondary administrators and institutional research staff responsible for IPEDS reporting.  
**Training Modality:** Blended (online modules + live virtual or in-person workshops)  
**Estimated Duration:** 4–6 hours total, delivered over 2–3 sessions

**Learning Objectives**

By the end of this training, participants will be able to:

1. **Identify** the key components, timelines, and interdependent roles involved in completing IPEDS surveys.
2. **Execute** the core actions of data collection, validation, and entry using tools and procedures appropriate to their institution.
3. **Evaluate** the completeness and accuracy of IPEDS data submissions in the context of institutional and federal compliance.

**Theoretical Foundation: Activity Theory in Action**

**Activity System Components:**

* **Subject:** Institutional research staff and administrators
* **Object (Goal):** Accurate, compliant, and timely IPEDS survey submissions
* **Outcome:** Institutional data quality and federal compliance
* **Tools:** Institutional data systems, IPEDS interface, templates, glossaries, checklists
* **Community:** IR team, finance, academic units, IT staff
* **Rules:** IPEDS definitions, federal timelines, institutional policies
* **Division of Labor:** Differentiated roles such as gatherer, validator, submitter

**Learner Application:**Participants complete a "Map Your System" worksheet, identifying how their institution approaches IPEDS reporting—its tools, roles, workflows, and bottlenecks.

**Learning Objective Assessed:**

* **Identify** roles, timelines, and components of the survey process

**Instructional Strategies with Experiential Focus**

1. **Role-Based Practicum Simulation**
   * Participants rotate through key reporting roles: Data Gatherer, Data Validator, Entry Specialist, and Compliance Reviewer.
   * The simulation is based on a realistic IPEDS scenario with challenges such as missing data, ambiguous definitions, and an upcoming deadline.

**Learning Objectives Assessed:**

* **Execute** core actions in each role
* **Evaluate** data quality and completeness during final review

1. **Collaborative Group Work**
   * Small teams simulate a full IPEDS reporting cycle using a mock dataset.
   * Teams document data sources, justify decisions, and work toward a complete mock submission.

**Learning Objectives Assessed:**

* **Execute** data collection and entry tasks
* **Evaluate** submission readiness during group review

1. **Tool-Mediated Learning**
   * Participants are guided in using actual tools that support IPEDS reporting, such as:
     + A validation checklist
     + A glossary of IPEDS terms
     + A step-by-step reporting template

**Learning Objectives Assessed:**

* **Execute** reporting actions using appropriate tools
* **Evaluate** data quality based on tool-supported checks

1. **Reflective Learning**
   * After each round of simulation, learners complete both an individual and team reflection.
   * Reflections focus on how their role contributed to the process, what challenges emerged, and how collaboration and tools affected their outcome.

**Learning Objectives Assessed:**

* **Evaluate** the impact of individual and group contributions on reporting quality

**Learning Activities**

|  |  |  |
| --- | --- | --- |
| **Activity** | **Type** | **Learning Objectives Assessed** |
| Map Your Institutional System | Reflective and analytical | **Identify** institutional tools and roles |
| Role-Based Simulation | Experiential and collaborative | **Execute**, **Evaluate** through realistic practice |
| Group IPEDS Reporting Challenge | Scenario-based, team-driven | **Execute**, **Evaluate** in simulated project |
| Peer Feedback and Reflection | Reflective and social | **Evaluate** teamwork, accuracy, and decision-making |
| Final Practicum Submission | Performance-based | All three: **Identify**, **Execute**, **Evaluate** |

**Assessment Methods**

**Formative Assessments:**

* Knowledge checks following the system-mapping activity
* Guided practice with feedback during simulations
* Group discussion and tool-based practice assessments

**Summative Assessment:**

* Final practicum project including:
  + Completed mock IPEDS submission
  + Annotated decisions with supporting tools
  + Group reflection on process and accuracy

**Rubric Measures:**

* Correct identification of data elements and reporting roles (**Identify**)
* Accurate execution of reporting tasks and tool usage (**Execute**)
* Thoughtful evaluation of data quality, completeness, and collaboration (**Evaluate**)

**Evaluation of Training Impact**

* Pre- and post-training self-assessments on confidence and IPEDS task proficiency
* Peer and facilitator feedback on role performance and collaboration
* Optional audit of real IPEDS submissions for improved accuracy and process efficiency
* Follow-up survey on how training applied to actual reporting tasks at participants’ institutions

**EXPLANATION OF INSTRUCTION**

This training is built around **Leontiev’s Activity Theory**, focusing on how people learn best by actually doing the task and seeing how their role fits into a bigger system. Since IPEDS reporting involves lots of moving parts (i.e., tools, people, deadlines, and rules), the training lets learners step into those real roles and experience what it’s like. They start by **mapping their own institutional activity system**, then move into hands-on practice through **role-based simulations**, switching between data gatherer, validator, and submitter. The idea is to make the process feel real and familiar, not just something they read about.

The instruction uses **simulations**, **mediating tools**, **collaborative group work**, and **structured reflection** so learners can actually try out the skills they need, with built-in support along the way. The training includes things like **checklists**, **cheat sheets**, and **guided reflections** to help them think through what they’re doing and why it matters. There’s room to mess up and talk it through with a group, just like in real reporting cycles. By rotating through roles and tackling **realistic scenarios** together, they get a feel for how the whole system works, not just their part. This helps the learning stick and builds confidence.

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Oar and Rubber Boot

Theory name: Gibson’s Ecological Approach to Learning

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* J.J. Gibson
  + The primary architect of the theory
  + Introduced the concept of direct perception in his book *The Ecological Approach to Visual Perception*
* Contributors influenced by Gibson’s work include:
  + Newen, de Bruin, & Gallagher (The Four E’s of Cognition)
  + Friston (Active Inference)
  + Hoffman & Prakash (Conscious Agent Theory)

FUNDAMENTAL ASSUMPTIONS

* Direct Perception
  + The environment provides all the necessary information to perceive and act without cognitive inference
* Learning is ecological
  + It emerges through interaction between the learner and the environment, not through the passive transfer of knowledge
  + Learning is embedded within an interconnected system, where the context, tools, social relationships, and environment all influence development
* The environment shapes learning
  + By manipulating constraints in the environment, educators can aid in skill emergence and adaptive learning
* Knowledge is action-based
  + Skills and understanding arise from doing, not just observing
* Key concepts supporting these assumptions:
  + Affordances
    - Possibilities for action in the environment that are perceived directly
  + Invariants
    - Aspects of the environment that remain constant as perspectives are changed
  + Attractors
    - Patterns that emerge given the constraints of the environment

DESIGN PROCESS

Instructional design based on Gibson’s Ecological Approach to Learning includes these strategies:

* **Identify the Goal Behavior or Skill**: Clarify what you want learners to be able to do by the end of the learning experience. *Application: Focus on real-world abilities like adapting to different situations or solving problems, not just memorizing information.*
* **Design Authentic, Representative Learning Environments**: Create tasks and settings that reflect the context where learners will use the skill*. Application: Use scenarios or simulations that include the kinds of tools, challenges, and conditions learners will encounter in real life.*
* **Modify Environmental Constraints**: Adjust physical, social, or task-related factors to help shape learning in useful ways. *Application: Change elements like rules, tools, or space to encourage specific actions like teamwork, timing, or decision-making.*
* **Incorporate Affordances and Invariants**: Design learning experiences that help learners recognize what actions are possible without needing step-by-step instructions. *Application: Choose materials and activities that naturally guide learners toward discovering and doing what’s needed.*
* **Emphasize Variability and Exploration**: Provide a mix of challenges so learners can build flexible, adaptable skills. *Application: Change up the conditions, tasks, or tools to help learners practice solving problems in different ways.*
* **Minimize Direct Instruction**: Let learners learn by doing, rather than being told exactly what to do. *Application: Give space for trial and error, and let learners make decisions based on what they notice and experience.*
* **Observe Emergent Performance**: Evaluate how well learners adapt and respond within the learning environment. *Application: Look at real-time behaviors and decision-making instead of relying only on quizzes or tests.*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design Plan: IPEDS Survey Training Using Gibson’s Ecological Approach to Learning**

**1. Learning Objectives**

By the end of this training, participants will be able to:

* **Detect** key affordances in the IPEDS reporting interface and related institutional tools.
* **Respond** to reporting prompts, system cues, and feedback in real time.
* **Apply** IPEDS guidelines accurately within authentic reporting environments.

**2. Ecological Theory in Action**

This training is grounded in **Gibson’s Ecological Approach to Learning**, which emphasizes the importance of **direct perception** and learning through **interaction with real environments**. In this view, learners don’t need to construct abstract internal representations to act—they instead perceive and act upon **affordances**, or opportunities for action, directly in their environment.

The instructional design avoids decontextualized lecture-style learning and instead immerses participants in an **authentic reporting ecosystem**. Learners interact with realistic tools, datasets, interfaces, and timelines that **reveal the structure of the task** through natural cues and constraints. Instead of passively receiving information, learners actively explore and **perceive relevant data relationships**, task affordances, and environmental feedback that guide decision-making during IPEDS reporting.

**3. Instructional Strategies**

* **Perception-action coupling**: Learners work directly with mock IPEDS platforms or interfaces that simulate institutional conditions.
* **Authentic environments**: All practice activities take place within a contextualized simulation—complete with realistic datasets, institutional branding, and deadlines.
* **Feedback-rich environments**: Immediate feedback is provided through system prompts, reporting errors, and peer/instructor input that mimics real-world reporting support.
* **Environmental scaffolds**: Templates, pre-formatted spreadsheets, and visual cues are built into the tasks—not as separate instruction, but as **embedded supports** learners naturally detect and respond to.

**4. Learning Activities**

* **Interface Walkthrough** (assesses *detect*): Learners explore a simulated IPEDS reporting system to identify key affordances (e.g., tooltips, validation prompts, section headers). Facilitators challenge learners to point out what features offer clues for what to do next.
* **Data Troubleshooting Drill** (assesses *respond*): Participants are given partially completed datasets containing subtle errors or missing values. They must interact with the system or facilitator to **respond** appropriately, correcting errors using available environmental cues.
* **End-to-End Simulation** (assesses *apply*): Working within a full IPEDS mock submission platform, learners **apply** their knowledge to complete a full reporting cycle—selecting the correct categories, uploading institutional data, and responding to any system flags or missing inputs.

**5. Assessment Methods**

**Formative Assessments**:

* During exploratory tasks, facilitators conduct **observational checklists** as learners **detect** and respond to system features.
* A brief verbal debrief allows learners to explain what they noticed and how it helped them proceed.

**Summative Assessment**:

* In the final simulation, learners are assessed on their ability to **apply** IPEDS requirements using embedded system tools and supports. Accuracy, timing, and appropriateness of responses to affordances (like system alerts) are evaluated.

**6. Evaluation of Training Impact**

* **Pre- and post-training task audits**: Compare how efficiently and accurately learners interact with the IPEDS interface before and after training.
* **User feedback forms**: Evaluate how “real” the training environment felt and how easily learners transferred training into actual work contexts.
* **Behavioral observations**: Track whether learners begin to rely more on embedded affordances (rather than external instructions) over time—indicating a shift toward ecological learning patterns.

**EXPLANATION OF INSTRUCTION**

This training is grounded in **Gibson’s Ecological Approach to Learning**, which emphasizes the idea that learners perceive actionable information directly from their environment. Rather than relying on abstract instruction, this design places participants in a **realistic, interactive reporting environment** where they can **detect affordances** (i.e., visual cues, system prompts, and data templates) that naturally guide them toward successful IPEDS survey completion. By allowing learners to explore and interpret these affordances in context, the training supports authentic understanding of how the reporting system functions, enabling learners to act without relying solely on memorization or step-by-step directions.

The design includes **perception-action coupling**, encouraging learners to **respond** in real time to simulated system feedback and incomplete datasets. Tasks are grounded in **authentic environments**, mirroring the structure, tools, and timelines used in actual IPEDS reporting. Learners **apply** IPEDS guidelines using embedded supports like color-coded alerts and pre-formatted spreadsheets. These are designed to be **naturally perceived**, not explicitly taught. This instructional approach leverages **direct interaction with tools and tasks**, allowing learners to build confidence and competence through situated experience, realistic feedback, and active environmental engagement.

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Oar and Rubber Boot

Theory name: Bandura’s Social Learning Theory

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* Albert Bandura
  + Considered the father of the Social Learning Theory (SLT), later referred to as Social Cognitive Theory
  + Introduced key ideas like observational learning, self-efficacy, and reciprocal determinism
* Neal Miller & John Dollard
  + Early research on socially motivated learning (i.e., drive, cue, response, reward)
  + Influenced by the behavioral and cognitive revolutions in psychology

FUNDAMENTAL ASSUMPTIONS

* Learning happens through observation
  + People can learn by watching others perform a behavior and then replicating it
* Cognition matters
  + Unlike behaviorism, this theory includes attention, memory, and motivation as key parts of the learning process
* Behavior is shaped by the environment, the person, and the behavior itself
  + Bandura’s concept of reciprocal determinism explains how these three factors continuously influence each other
* Key Components of Observational Learning
  + Attention: Learners must notice the model’s behavior. Attention is more likely if the model is engaging or similar to the learner.
  + Retention: Learners must remember what they observed to apply it later
  + Reproduction: Learners need to be able to physically and mentally reproduce the behavior
  + Motivation: Learners must see a reason to replicate the behavior (like expected rewards or personal relevance). Rewards/reinforcements must be understood (outcome expectancy) for modeling to have desired effect.
* Learning doesn’t require reinforcement or emotional involvement
  + While reinforcement can increase motivation, it’s not necessary for learning to occur. Just observing is enough.
  + An emotional connection is not required for learning to occur
* Models influence behavior
  + Learners are more likely to imitate someone they view as competent, relatable, or socially relevant

DESIGN PROCESS

Instructional design based on Bandura’s Social Learning Theory includes these strategies:

* **Model Desired Behaviors**: Show learners exactly what success looks like through live demonstration, videos, or peer modeling. *Application: Use examples in classrooms, labs, or training environments where learners can see skills in action.*
* **Capture Attention Early**: Use engaging, emotionally compelling, or relatable models to draw learners in. *Application: Start lessons with a surprising demo, story, or relevant example to boost engagement.*
* **Support Memory and Recall**: Help learners remember what they’ve seen by reviewing key steps, offering visuals, or using storytelling. *Application: Summarize, repeat key points, and link new actions to existing knowledge or schema.*
* **Create Opportunities for Practice**: Allow learners to try out the modeled behavior and receive feedback. *Application: Use role play, simulations, or "see one, do one, teach one" cycles in skill-building tasks.*
* **Provide Motivation and Reinforcement**: Offer praise, rewards, or constructive feedback to boost learner motivation. *Application: Reinforce successful attempts and highlight real-world benefits of applying the behavior.*
* **Build Self-Efficacy**: Help learners believe they can succeed at what they observed. *Application: Set learners up for small wins, and give supportive feedback that builds confidence.*
* **Watch for Negative Modeling**: Ensure that learners aren't picking up undesired behaviors from peers or media. *Application: Monitor group dynamics and address unproductive behaviors as soon as they appear.*

Special considerations for online learning:

* **Use Video-Based Modeling**: Online learning should incorporate video demonstrations of both correct and incorrect behaviors, allowing learners to compare and reflect. *Application: Use screen recordings, narrated walkthroughs, or peer-recorded performances in discussion threads.*
* **Leverage Peer Interaction**: Use discussion forums, group projects, and peer review to create observation and imitation opportunities. *Application*: *Assign students to observe and give feedback on each other’s work (e.g., in video submissions or collaborative documents).*
* **Create Opportunities for Reflection**: Because online learning can lack spontaneous feedback, include structured reflection activities. *Application*: *Use prompts that encourage learners to reflect on what they observed and how they plan to apply it (e.g., journal entries or blog-style posts).*
* **Integrate Social Presence**: Promote a sense of connection and visibility among learners. *Application*: *Include instructor videos, peer shoutouts, and opportunities to share personal experiences related to course content.*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design Outline – IPEDS Survey Completion Using Bandura’s Social Learning Theory**

**Target Audience:** Postsecondary administrators responsible for IPEDS reporting  
**Training Topic:** Completing the IPEDS Graduation Rates Survey

**1. Learning Objectives**

By the end of this training, participants will be able to:  
• **Describe** the purpose and structure of the IPEDS Graduation Rates survey.  
• **Analyze** a completed IPEDS survey for accuracy and completeness.  
• **Demonstrate** correct data entry procedures for the Graduation Rates component.

**2. Instructional Strategies**

• **Modeling**: Facilitators provide narrated walkthroughs of IPEDS tasks, showing both how and why decisions are made.  
• **Attention-Capturing Techniques**: Use real-world data mistakes or institutional anecdotes to emotionally and intellectually engage learners early.  
• **Visual Reinforcement and Recall**: Infographics, screen captures, and templates support memory and step-by-step review.  
• **Practice with Feedback**: Learners practice tasks in simulations and receive feedback from both peers and facilitators.  
• **Reinforcement**: Positive feedback, peer recognition, and real-world application value are emphasized.  
• **Self-Efficacy Support**: Tasks are scaffolded with early wins, and learners reflect on progress to build confidence.  
• **Online Integration**: Incorporate demo videos, screen-recorded peer walkthroughs, and reflective activities to maintain social presence online.

**3. Learning Activities**

• **Model-Watch-Reflect** *(assesses* ***Describe****)*: Facilitators demonstrate a full Graduation Rates section. Learners watch, then reflect in a journal to **describe** the purpose and structure of the section using their own institutional context.  
• **Peer Review of Demo Submissions** *(supports* ***Analyze*** *and* ***Demonstrate****)*: Learners record themselves entering data into a mock IPEDS interface, demonstrating data entry procedues. Peers analyze each other’s work for errors and completeness, giving feedback on what was done well or inaccurately.  
• **Simulated Group\* Audit** *(assesses* ***Analyze*** *and* ***Demonstrate****)*: Groups receive flawed submissions and are tasked with correcting them. During a debrief, each group **analyzes** the original errors and **demonstrates** the corrections.  
• **Role Play: See One, Do One, Teach One** *(assesses* ***Describe*** *and* ***Demonstrate****)*: Learners first observe a task, demonstrate it themselves, then teach it to a partner describing appropriate terminology, reinforcing accuracy and clarity.  
• **Engagement Hook**: Session begins with a short story about an IPEDS reporting error that affected funding, to **capture attention** and increase relevance.

**4. Assessment Methods**

**Formative Assessments:**• Peer and facilitator feedback on mock submissions and recorded walkthroughs.  
• Observation during group correction activities and role play, checking for task accuracy.

**Summative Assessment:**• Final project: Complete and submit a corrected mock Graduation Rates survey with a recorded group debrief. Each learner must clearly **describe** survey structure, **analyze** submitted data, and **demonstrate** corrections. All three objectives are assessed.

**5. Evaluation of Training Impact**

• Immediate post-training survey asking about clarity of modeling, usefulness of peer feedback, and confidence with data entry.  
• Review of reflection journals for evidence of growth in understanding and confidence.  
• Optional follow-up (2–4 weeks later) to assess use of modeled strategies during real IPEDS reporting.

**\*Group Formation Challenge Addressed:** Some learners miss opportunities for observation and modeling when group dynamics are off or when they're excluded from stronger groups.

**Solution:**

* **Structured Pairing for Modeling:** Instead of open group formation, use a **rotational model** where learners are intentionally paired with different partners over time to observe, model, and practice behaviors. This ensures all learners are included and benefit from diverse peer models.
* **Mentor-Buddy System:** Pair newer or struggling learners with more experienced peers who have already demonstrated mastery through previous activities. This supports **self-efficacy building** and helps all learners feel valued.

**EXPLANATION OF INSTRUCTION**

This training is designed around **Bandura’s Social Learning Theory**, which emphasizes how much we learn by watching others, trying it ourselves, and getting feedback along the way. From the start, participants **observe modeled behaviors** through facilitator walkthroughs and peer video demos, giving them a strong visual and verbal example of what success looks like. Then, they get multiple chances to **practice what they’ve seen**, from correcting flawed submissions to teaching a peer, which helps solidify the skills.

Throughout the lesson, there are strategies to **capture attention**, **build confidence**, and **support recall**. This is done by beginning with a real-world data mishap and offering **structured feedback** loops during practice. Because this training can also be done online, we made sure to include **video-based modeling**, **peer review**, and **reflective journaling** to keep it social and engaging even from a distance. To ensure equitable access to observation and modeling opportunities, we’ve addressed the group formation challenge by using structured pairing for modeling and a mentor-buddy system, so no learner is left out of strong peer interactions. Everything’s intentionally designed to help learners feel supported, motivated, and ready to tackle real IPEDS reporting with confidence.

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Oar and Rubber Boot

Theory name: Collaborative Learning

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* Lev Vygotsky
  + Laid the foundation for the Collaborative Learning Theory with his social development theory and his concept of the Zone of Proximal Development (ZPD)
  + Emphasized the role of social interaction and the More Knowledgeable Other (MKO)in learning
  + Highlighted that learners co-construct knowledge by working with others

FUNDAMENTAL ASSUMPTIONS

* Learning is social
  + Students learn better when they interact, share, and reflect together rather than learning in isolation
* Knowledge is Co-Constructed
  + Understanding comes through discussion, negotiation, and by integrating different perspectives
* Peers Can Act as Teachers
  + In the absence of a formal MKO, learners can take on that role for one another by explaining, questioning, and modeling
* Collaboration Encourages Higher-Order Thinking
  + Working in groups promotes critical thinking, problem-solving, and deeper processing of information
* Responsibility is Shared (Interdependence)
  + Effective collaboration involves both individual accountability and group responsibility for outcomes

DESIGN PROCESS

Instructional design based on Collaborative Learning Theory includes these strategies:

* **Form Learning Groups Strategically**: Use both short-term (informal) and long-term (formal) groups depending on the task. *Application: Create small, diverse teams for one-time discussions or extended projects, using clear expectations and rotating membership when needed.*
* **Design Problem-Based and Inquiry-Based Tasks**: Use real-world challenges that require group problem-solving and discussion. *Application: Structure activities around problem-based learning (PBL) principles. Present students with a messy, authentic problem and have them work together to research, hypothesize, and propose solutions.*
* **Embed Peer-to-Peer Interaction**: Make space for students to learn from each other through dialogue, negotiation, and feedback. *Application: Use strategies like Think-Pair-Share, online discussion boards, or shared workspaces like Google Docs.*
* **Facilitate Reflection and Metacognition**: Encourage students to reflect on how they worked together and what they learned from the process. *Application: Include self- and peer-assessment, group debriefs, or reflection journals that focus on group dynamics and contributions.*
* **Assess Both Individual and Group Performance**: Assess both the product and the process of collaboration. *Application: Use rubrics, group presentations, participation tracking, and reflective feedback to assess collaborative efforts and individual roles.*
* **Support Collaboration with Technology**: Use digital tools to extend collaboration beyond the classroom. *Application: Incorporate tools like video conferencing, shared docs, virtual whiteboards, and AI tools to allow for synchronous or asynchronous teamwork.*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design Outline – IPEDS Survey Completion Using Collaborative Learning Theory**

**Target Audience:** Postsecondary administrators responsible for IPEDS reporting  
**Training Topic:** Completing the IPEDS Graduation Rates Survey

**1. Learning Objectives**

By the end of this training, participants will be able to:  
• **Collaborate with peers** to interpret and complete components of the IPEDS survey.  
• **Explain the purpose and structure** of the IPEDS survey to a colleague using institutional language and examples.  
• **Apply institutional data** appropriately within IPEDS reporting categories through guided group work.

**2. Instructional Strategies**

Instructional design rooted in **Collaborative Learning Theory** includes:

* **Strategic Grouping\***: Learners are placed in intentionally mixed teams that shift depending on the task scope.
* **Problem-Based Learning (PBL)**: Participants tackle open-ended data scenarios that mimic the real-life ambiguity of IPEDS categorization.
* **Peer Interaction**: Frequent dialogue, negotiation, and shared workspaces create opportunities for peer-led learning.
* **Reflection and Metacognition**: Learners assess both group processes and their individual contributions.
* **Dual-Level Assessment**: Both group outputs and individual roles are evaluated for accountability and growth.
* **Technology-Enhanced Collaboration**: Use of shared docs, virtual rooms, and collaborative tools supports interaction across formats.

**3. Learning Activities**

* **Collaborative IPEDS Problem Challenge**Learners are given messy, real-world data from a fictional institution and work in small groups (collaborate) to clean, classify, and **apply institutional data** to mock IPEDS survey sections. Each team presents its decisions and receives peer feedback.  
  → *Assesses: Apply institutional data, Collaborate with peers*
* **Think-Pair-Teach**Participants first **explain the purpose and structure** of a portion of the IPEDS survey individually, then in pairs, and finally teach it to a small group. This builds conceptual clarity through dialogue and repetition.  
  → *Assesses: Explain the purpose and structure*
* **Rotating Peer Review Stations**Groups rotate through review stations where they critique sample IPEDS submissions and leave written feedback. This promotes peer-to-peer interaction (collaboration) and reinforces understanding and application of reporting logic.  
  → *Supports: Apply institutional data, Collaborate with peers*
* **Group Reflection + Debrief**Teams complete a brief structured reflection on their collaboration, including communication, role division, and problem-solving approaches. Individuals also write a reflection on their learning and growth.  
  → *Assesses: Collaborate with peers*
* **Tech Tools in Action**Throughout the training, teams use shared (collaborative) Google Docs, whiteboards, and breakout rooms for planning, discussion, application, and submission of work. A shared rubric is visible for all assessments.  
  → *Supports: Collaborate with peers, Apply institutional data*

**4. Assessment Methods**

**Formative Assessments**

→ *Assesses all three objectives: Collaborate with peers, Explain the purpose and structure, Apply institutional data*

* Peer feedback on group decision-making and application of IPEDS logic
* Group debrief discussions and collaborative notes
* Self- and peer-assessments on teamwork and contributions

**Summative Assessment**

→ *Assesses all three objectives: Collaborate with peers, Explain the purpose and structure, Apply institutional data*

* Final group submission: mock IPEDS section with a rationale and brief video walk-through of the purpose, application, and process
* Reflective journal on group collaboration, communication, and individual understanding

**5. Evaluation of Training Impact**

* Post-session surveys evaluating perceived clarity, usefulness of peer interaction, and sense of contribution
* Review of team and individual reflections for depth of learning and collaborative growth
* Optional follow-up 2–4 weeks later on implementation of collaboration-based practices in real reporting scenarios

**\*Group Formation Challenge Addressed:** Group formation based on student choice can lead to cliques, while random assignment might not support strong collaboration.

**Solution:**

* **Community Building Before Grouping:** Begin with **low-stakes whole-class collaborative tasks** and self-reflection activities to help students get to know each other’s working styles and strengths.
* **Self-Interest Surveys + Instructor Grouping:** Have students fill out a short form about their interests, strengths, and preferred work styles. Use this to assign **balanced and interest-aligned groups**.
* **Group Agreements:** Once formed, each group creates a **collaboration agreement** that outlines expectations and norms, empowering them to take ownership of how they work together.

**EXPLANATION OF INSTRUCTION**

This training applies **Collaborative Learning Theory**, which emphasizes learning through social interaction and shared problem-solving. Participants work in **rotating groups** to tackle ambiguous IPEDS challenges (aligning with **Problem-Based Learning**), **co-construct understanding** of reporting requirements. They **explain and apply** their learning through conversation, teaching, and group submission tasks, all designed to encourage **peer interaction**. The **Think-Pair-Teach** activity supports **metacognition**, while **peer review** and **group reflection** reinforce accountability and deepen insight.

The learning design balances **real-world complexity** with **dual-level assessment** of both group products and individual roles, promoting fairness and growth. **Digital tools** are used throughout to support technology-enhanced collaboration, ensuring visibility, shared ownership, and active participation in both in-person and online settings. To support more effective collaboration, groups are formed using self-interest surveys and a brief community-building phase to ensure balance, inclusivity, and shared ownership from the start. This structure not only helps learners build IPEDS expertise, it helps them build one another up in the process.

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Oar and Rubber Boot

Theory name: Social Interdependence Theory

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* Kurt Lewin
  + Provided foundational ideas on motivation and goal-oriented behavior
* Morton Deutsch
  + Introduced Social Interdependence Theory, distinguishing between cooperation and competition
* David W. Johnson & Roger T. Johnson
  + Expanded and applied the theory by developing five essential components for cooperative learning and integrating it into educational settings
* Neil Davidson
  + Collaborated on early development
* Elliot Aronson
  + Created the Jigsaw Method, a structured cooperative learning strategy

FUNDAMENTAL ASSUMPTIONS

* Learning is social and depends on interactions with others
* Students succeed by working together toward a common goal. Individual success is linked to group success (positive interdependence).
* Each student is responsible for their own contribution and learning, even while working as part of a team
* Cooperation and competition are separate processes with different outcomes on learning
* Effective group work requires intentional design and the development of social and collaborative skills
* Students develop leadership, confidence, and critical thinking when actively engaged in structured group work.

DESIGN PROCESS

Instructional design based on Social Interdependence Theory and Cooperative Learning includes the following strategies:

* **Define a Clear Goal**: Set a shared academic objective that all group members are working toward. *Application****:*** *Clearly articulate the learning outcome or product expected from the group so students understand the purpose and can align their efforts (Positive Interdependence).*
* **Design Structured Group Tasks**: Create tasks that require meaningful collaboration. *Application: Use structured strategies like Jigsaw, Think-Pair-Share, and team-based inquiry projects with defined goals (Promotive Interaction).*
* **Assign Clear Roles and Responsibilities**: Ensure each student has a unique, meaningful role within the group. *Application: Assign roles such as researcher, recorder, presenter, and timekeeper to support accountability and balance workloads (Individual Accountability).*
* **Promote Positive Interdependence**: Build tasks that require group success for individual success. *Application: Have students submit both individual components and a collective product to reinforce mutual responsibility (Positive Interdependence).*
* **Promote Social Skill Development**: Teach collaboration, communication, and conflict resolution. *Application: Use group norm-setting, teamwork rubrics, and peer evaluations to help students grow socially and academically (Interpersonal and Social Skills).*
* **Encourage Group Reflection**: Give space for teams to evaluate their collaboration and learning*. Application: Include group debriefs, reflection journals, or self/peer assessments after tasks (Group Processing).*
* **Integrate Flipped Classroom Techniques**: Use pre-class content delivery so class time focuses on active, cooperative work. *Application: Provide videos or readings beforehand; use class time for group projects and discussions (Promotive Interaction).*
* **Adapt for Diverse Learners**: Ensure activities are inclusive and supportive of all learners. *Application: Scaffold tasks, provide flexible roles, and differentiate group expectations for learners with special needs (Interpersonal and Social Skills).*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design Outline – IPEDS Survey Completion Using the Social Interdependence Theory**

**Target Audience:** Postsecondary administrators responsible for IPEDS reporting  
**Training Topic:** Completing the IPEDS Graduation Rates Survey

1. Learning Objectives

By the end of this training, participants will be able to:  
**•**Work interdependently with peers to complete a simulated section of the IPEDS survey using institutional data.  
**•**Articulate individual responsibilities within a group IPEDS reporting task.  
**•**Reflect on how group collaboration supported accurate and complete IPEDS reporting.

2. Instructional Strategies

• **Positive Interdependence**: Shared goals and tasks ensure that group success depends on every member contributing.  
• **Promotive Interaction**: Collaborative tasks require learners to engage in discussion and negotiation to reach consensus.  
• **Individual Accountability**: Each group member is assigned a specific role to ensure balanced contribution.  
• **Interpersonal and Social Skill Building**: Time is carved out to develop collaboration, communication, and conflict resolution skills.  
• **Group Processing**: Reflection and feedback are embedded to help teams improve their collaboration over time.  
• **Flipped Content Access**: Foundational concepts are introduced ahead of time so training time is focused on group application.

3. Learning Activities

• **Flipped Prep Video (pre-training)**: Before the live session, learners watch a short video overview of IPEDS survey sections and a quick case study on a data error caused by miscommunication. This sets the stage for collaborative problem-solving and helps learners arrive ready to contribute.

• **Team Simulation (assesses Work interdependently with peers)**: Small groups\* receive a data packet from a fictional institution. Each member is assigned a role (e.g., data analyst, categorizer, quality checker). Together, they work to **complete a simulated IPEDS survey section**, with each role’s contribution tied to overall group success.

• **Jigsaw Peer Review (assesses Articulate individual responsibilities)**: After completing the group task, teams break into cross-group jigsaw groups. Each learner articulates their role, how they contributed, and explains key decisions made during the simulation.

• **Group Reflection Journal (assesses Reflect on how group collaboration supported reporting)**: Each team completes a brief collaborative reflection on how well they communicated, divided tasks, and learned from the process. Individual prompts help surface both personal takeaways and group dynamics.

4. Assessment Methods

**Formative**:  
• Facilitator observation during simulation for promotive interaction and role clarity  
• Jigsaw discussion notes evaluating individual accountability and peer understanding

**Summative**:  
• Final group submission of a mock IPEDS section with a short video or written explanation  
• Group reflection journal assessing collaboration, accuracy, and growth in cooperative skills

5. Evaluation of Training Impact

• Post-training survey on perceptions of group collaboration and role clarity  
• Follow-up self-report survey (2–3 weeks post-training) on real-world application of collaboration strategies  
• Optional manager feedback on accuracy and completeness of post-training IPEDS submissions

**\*Group Formation Challenge Addressed:** Assigned groups can lead to uneven participation or social tension, undermining the positive interdependence that’s core to this theory.

**Solution:**

* **Role-Based Rotation:** In every task, assign structured, rotating roles (e.g., facilitator, note-taker, challenger, presenter). This creates **individual accountability** and allows all voices to be heard.
* **Conflict Navigation Practice:** Incorporate **quick mini-lessons on teamwork and communication** skills. Use role-play or discussion scenarios about what to do if someone feels left out or unheard.
* **Group Choice After Round 1:** Initially assign groups, but for future activities, **allow students to request one peer they'd like to work with**, balancing autonomy and fairness.

**EXPLANATION OF INSTRUCTION**

This lesson applies **Social Interdependence Theory** by focusing instruction around **group goals**, **shared responsibility**, and **structured collaboration**. Learners don’t just complete a task. They **work interdependently** to meet a common objective, with each role carrying a part of the load. Assigning defined responsibilities reinforces **individual accountability**, while jigsaw and group reflection give learners the chance to process what they contributed and how the team functioned as a whole**.** To ensure positive group dynamics from the start, learners are placed in assigned teams for the first round, with Role-Based Rotation built in to support fairness and inclusion. For subsequent activities, learners may request one peer they'd like to work with, striking a balance between autonomy and equity.

To keep the session focused and meaningful, **flipped content** is used so that foundational concepts are covered ahead of time and class time can emphasize **promotive interaction**. During the lesson, learners use real-world data to apply their understanding in hands-on ways. A brief conflict navigation practice gives learners a chance to build **interpersonal and social skills** and rehearse what to do when communication breaks down. This structure not only helps learners gain a stronger grasp of IPEDS reporting, it also teaches them how **collaboration, communication,** and **shared accountability** drive success.

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Oar and Rubber Boot

Theory name: Self-Regulated Learning

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* Albert Bandura
  + Known as the father of Social Cognitive Theory
  + Laid the groundwork for SRL with his focus on self-efficacy and the interaction of personal, behavioral, and environmental factors
* Barry Zimmerman
  + Founder of the SRL theory
  + Introduced the three-phase model: forethought, performance, and self-reflection
* Paul Pintrich
  + Expanded on Zimmerman’s model
  + Added motivational and emotional factors to create a more comprehensive understanding of self-regulated learning

FUNDAMENTAL ASSUMPTIONS

* Learning is an active, self-directed process
  + Students learn best when they take control of their goals, progress, and learning strategies
* Self-efficacy is central to success
  + Belief in one's ability to succeed plays a key role in motivating learners
* Metacognition and motivation are essential
  + Monitoring, evaluating, and adjusting strategies is just as important as effort and content knowledge
* Learning follows a three-phase cycle
  + Forethought: setting goals and planning
  + Performance: applying strategies and tracking progress
  + Self-Reflection: evaluating outcomes and adjusting for next time

DESIGN PROCESS

Instructional design based on SRL includes the following strategies:

* **Goal-Setting and Planning***:* Help learners define clear, achievable goals before starting a task*.* *Application: Provide prompts, checklists, or goal-setting templates to encourage intentional planning.*
* **Support Strategy Use and Monitoring**: Guide learners to apply appropriate strategies while working and reflect on how they’re doing. *Application****:*** *Incorporate think-alouds, self-monitoring checklists, or mid-task reflection questions.*
* **Promote Self-Assessment and Reflection**:Encourage learners to evaluate their performance and consider how to improve next time. *Application****:*** *Use reflection journals, post-task surveys, or guided self-assessments.*
* **Build Motivation and Self-Efficacy**:Design instruction that reinforces students’ belief in their ability to succeed. *Application****:*** *Share success stories, provide constructive feedback, and allow for choice and autonomy.*
* **Adapt to Individual Needs**: Create flexible learning paths and allow for learner control where possible. *Application****:*** *Offer tiered assignments, multiple means of expression, and self-paced modules.*
* **Embed SRL Across Contexts**: Integrate SRL strategies into various learning environments. *Application****:*** *Use group discussions in classrooms, interactive tools in online courses, or reflective prompts in workplace training.*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design Outline – IPEDS Survey Completion Using Self-Regulated Learning**

**Target Audience:** Postsecondary administrators responsible for IPEDS reporting  
**Training Topic:** Completing the IPEDS Graduation Rates Survey

1. Learning Objectives

By the end of this training, participants will be able to:  
**LO1.** **Set clear goals** to guide IPEDS data reporting tasks.  
**LO2.** **Apply appropriate strategies** to plan, monitor, and complete IPEDS survey components.  
**LO3.** **Reflect on their performance** and identify ways to improve IPEDS reporting processes in future cycles.

2. Instructional Strategies

• **Goal-Setting and Planning** – Learners define personal and task-specific goals.  
• **Strategy Use and Monitoring** – Activities prompt learners to select and apply strategies, then evaluate their effectiveness.  
• **Self-Assessment and Reflection** – Reflection prompts and checklists foster deeper awareness of learning and performance.  
• **Motivation and Self-Efficacy Support** – Training includes autonomy, small successes, and relevance to real-world tasks.  
• **Differentiation and Learner Control** – Learners make choices about task format and pacing to meet their needs.  
• **Contextual Application** – Activities bridge classroom and real-world IPEDS work using collaborative and digital tools.

3. Learning Activities

• **Goal Mapping Exercise** (*assesses LO1*) – Learners set their goals for improving IPEDS practices using prompts and templates.  
• **Think-Aloud Strategy Walkthrough**  – Paired learners verbalize their approach to a reporting task using monitoring checklists.   
• **Guided IPEDS Reporting Task** (*assesses LO2*) – Participants complete a short IPEDS entry by applying pre-set strategies and then receive feedback.  
• **Reflection Journal** (*assesses LO3*) – Learners reflect on what strategies worked, what didn’t, and how they’ll adapt for future cycles.  
• **Self-Assessment Survey** (*supports LO3*) – Learners reflect on and rate their effort and outcomes against the training’s success criteria and discuss in groups\*.

4. Assessment Methods

**Formative Assessments:**• **Goal Maps** – Evaluated for alignment with reporting needs, showing evidence that learners **set clear goals** (LO1).  
• **Think-Alouds** – Observed to see how learners **apply appropriate strategies** (LO2).  
• **Checklists During Guided Task** – Used to track strategy application and task monitoring (LO2).

**Summative Assessment:**• **Reflection Journal** – Analyzed for evidence of **performance evaluation and planned improvement** (LO3).  
• **Mini IPEDS Submission** – Learners complete a small-scale IPEDS task, showing their ability to **apply strategies** (LO2) and use their **initial goals** (LO1) to guide reporting.

5. Evaluation of Training Impact

• **Post-Session Survey** – Captures changes in self-efficacy, goal clarity, and confidence in using SRL strategies.  
• **Journal Review** – Looks for growth in reflection and strategy awareness over time.  
• **Optional Follow-Up** – Participants share if and how they applied SRL tools in real IPEDS tasks 2–4 weeks post-training.

**\*Group Formation Challenge Addressed:** Learners who struggle with social dynamics may feel anxious in group settings, disrupting motivation and reflection.

**Solution:**

* **Choice in Collaboration Style:** Offer **two tracks**—one collaborative and one more independent—but both still include peer check-ins or discussion forums. This supports learner agency while maintaining SRL principles.
* **Group Entry Journals:** Have students write a quick reflection before grouping on what they need to thrive in a team. Instructors use this to form groups that **consider personality, communication style, and confidence**.
* **Mid-Project Peer Coaching:** Include structured peer coaching where students give and receive feedback not just on the task, but on their **collaboration strategies**, deepening both SRL and interpersonal awareness.

**EXPLANATION OF INSTRUCTION**

This training is grounded in **Self-Regulated Learning** and is built to help learners take ownership of the IPEDS reporting process from start to finish. The lesson begins by guiding participants through **goal-setting and planning**, using prompts and checklists to define their own learning goals and keep them visible throughout the lesson. As learners move through **scaffolded activities**, they engage in **strategy use and monitoring**, selecting and applying approaches for real IPEDS tasks. Paired think-alouds and collaborative problem-solving encourage learners to verbalize and adjust their strategies in real time.

The design incorporates **self-assessment** **and** **reflection** activities like prompts and checklists to help learners think about what they’re learning and how they’re improving. It also supports **motivation** **and** **self-efficacy** by allowing learners to make meaningful choices, experience early wins, and work on tasks that feel relevant. Learners also have **differentiation** **and learner control** with choices in task format, pacing, and collaboration style. To address group work dynamics, participants select between a collaborative or more independent track, and complete group entry journals to reflect on their needs before being grouped. A mid-project peer coaching activity allows learners to give and receive feedback not just on the task, but on how they're learning. These strategies, combined with **contextual application** through real-world scenarios, help learners build lasting skills.

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Oar and Rubber Boot

Theory name: Self-determination Theory

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* Edward Deci & Richard Ryan
  + Developed Self-determination Theory in the 1980s
  + Identified three basic psychological needs: autonomy, competence, and relatedness
  + Challenged behaviorist views by showing how external rewards can reduce intrinsic motivation

FUNDAMENTAL ASSUMPTIONS

* Autonomy
  + People are more motivated when they feel a sense of choice and control
* Competence
  + Motivation increases when individuals feel effective and capable
* Relatedness
  + A sense of belonging and connection with others supports engagement and persistence
* Motivation is a Continuum
  + Moves from externally controlled behavior to intrinsic motivation through internalization
* Intrinsic Motivation Leads to Deep Learning
  + When psychological needs are met, people are more likely to engage meaningfully

DESIGN PROCESS

Instructional design based on Self-determination Theory includes the following strategies:

* **Support Autonomy**: Give learners meaningful choices and ownership over their learning. Application*: Let students choose project topics or formats. Avoid overly controlling language.*
* **Build Competence**: Create appropriately challenging tasks with clear feedback and opportunities for mastery. Application*: Use scaffolding, formative feedback, and mastery-oriented assessments.*
* **Foster Relatedness**: Promote social connection and collaboration to help learners feel supported. Application*: Design group activities, peer feedback, and build strong teacher-student relationships.*
* **Encourage Intrinsic Motivation**: Focus on learning activities that are engaging, purposeful, and aligned with learners' interests. Application*: Integrate real-world tasks, reflective journaling, and inquiry-based learning.*
* **Promote Internalization of Extrinsic Motivation**: Help learners move toward more self-determined forms of motivation. Application*: Explain the value of tasks, connect them to personal goals, and encourage self-reflection.*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design for IPEDS Survey Completion Inspired by** Carmy Berzatto

**Target Audience:** Postsecondary administrators responsible for IPEDS reporting  
**Training Topic:** Completing the IPEDS Graduation Rates Survey

**1. Learning Objectives**

By the end of this training, participants will be able to:  
**LO1.** Choose appropriate data reporting strategies based on their institutional role and context.  
**LO2.** Accurately complete a section of the IPEDS survey using institutional data.  
**LO3.** Collaborate meaningfully with peers to improve both individual and group competence in IPEDS reporting.

**2. Instructional Strategies**

* **Support Autonomy** – Learners choose reporting examples or formats that align with their institutional role.
* **Build Competence** – Tasks are appropriately scaffolded and include mastery-based checkpoints.
* **Foster Relatedness** – Collaborative tasks and peer feedback foster mutual support.
* **Encourage Intrinsic Motivation** – Activities are grounded in real-world IPEDS work with authentic purpose.
* **Promote Internalization** – Reflection and self-assessment connect tasks to long-term professional goals.

**3. Learning Activities**

* **Carmy’s “Prep Board” (assesses LO1)** – Inspired by Carmy’s kitchen prep style, learners choose from a menu of reporting scenarios based on their department or institution size. Each option includes resources, templates, and deadlines.
* **Structured Kitchen Line (assesses LO2)** – Modeled after Carmy’s high-pressure, high-structure kitchen line, learners complete a section of the IPEDS survey with scaffolded steps and live feedback checkpoints.
* **Back-of-House Huddle (assesses LO3)** – Peer working groups collaborate by simulating a pre-service kitchen meeting where teams clarify goals, delegate roles, and complete an IPEDS mini-task together. Debrief includes giving each other feedback using a checklist that mirrors Carmy’s review process.
* **Chef’s Journal (supports LO1, LO2, LO3)** – Learners reflect on their choices, confidence in completion, and collaboration in a journal that connects their learning to broader reporting goals and personal development.

**4. Assessment Methods**

**Formative Assessments:**

* Results of chosen “prep board” pathway (LO1).
* Live facilitator feedback during scaffolded IPEDS completion entry task (LO2).
* Peer checklist from collaborative “huddle” task (LO3).

**Summative Assessment:**

* Submission of a completed mini-IPEDS entry with rationale for choices, collaborative feedback summary, and Chef’s Journal entry tying the experience to institutional needs and reporting goals (assesses all LOs).

**5. Evaluation of Training Impact**

* **Exit Survey** – Measures perceived autonomy, competence, and connection during the training.
* **Peer Feedback Logs** – Analyze comments for evidence of constructive collaboration and shared accountability.
* **Optional Follow-Up Check-In** – Administered 3–4 weeks post-training to evaluate integration of SDT strategies in actual IPEDS practice.

**EXPLANATION OF INSTRUCTION**

This lesson is structured around **Self-Determination Theory**, using Carmy Berzatto as a guiding metaphor for balancing structure and autonomy under pressure. Like his kitchen, the learning environment is fast-paced but intentional. Success depends on communication, clarity, and confidence. Learners are given **meaningful choices** that reflect their professional scope (supports **autonomy**), supported with **scaffolding** that **builds mastery** at every step (builds **competence**), and paired with **team-based activities** that **promote trust** and **shared purpose** (fosters **relatedness**).

Carmy’s approach is focused, careful, and demonstrates care for his team. That spirit carries into the training, where learners feel **ownership of their process** and recognize how their work contributes to something greater. Activities are rooted in real-world IPEDS tasks with **meaningful purpose** (encourage**s intrinsic motivation**) and include **reflection** and **self-assessment prompts** to help participants connect what they’re doing to long-term professional goals (promotes **internalization**).

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Oar and Rubber Boot

Theory name: Maslow’s Hierarchy of Needs

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* Abraham Maslow
  + Developed the Hierarchy of Needs in 1943
  + Emphasized a humanistic perspective focused on individual potential, growth, and well-being
  + Believed motivation is based on fulfilling innate human needs arranged in a hierarchical structure

FUNDAMENTAL ASSUMPTIONS

* Needs Are Hierarchical
  + People must meet lower-level needs before pursuing higher ones
  + Hierarchy includes: physiological, safety, love/belonging, esteem, cognitive, aesthetic, self-actualization, and transcendence
* Needs Are Simultaneous and Dynamic
  + Multiple needs can coexist; they fluctuate based on life context and personal experience
* Self-Actualization Is the Goal
  + The pinnacle of the hierarchy, representing the fulfillment of potential
* Motivation Is Human-Centered
  + Unlike behaviorist or psychoanalytic theories, it focuses on positive growth and self-improvement

DESIGN PROCESS

Instructional design inspired by Maslow's Hierarchy of Needs includes the following strategies:

* **Address Physiological and Safety Needs:** Ensure students are physically and emotionally ready to learn. *Application*: *Provide access to resources, reduce test anxiety, and create a structured, safe environment.*
* **Foster Belonging:** Build community and connection in the classroom. *Application*: *Use group work, discussions, and mentorship to help learners feel included.*
* **Support Esteem and Confidence:** Encourage success and validate effort. *Application*: *Scaffold instruction, celebrate progress, and give growth-oriented feedback.*
* **Promote Cognitive Engagement:** Stimulate curiosity and deeper understanding. *Application*: *Integrate inquiry-based learning, problem-solving tasks, and real-world application.*
* **Incorporate Aesthetic Elements:** Enhance content with design, creativity, and storytelling. *Application*: *Use visuals, music, art, or multimedia projects to increase engagement.*
* **Encourage Self-Actualization:** Help students explore interests, develop purpose, and set personal goals. *Application*: *Design open-ended projects, choice-based assessments, and reflection activities.*
* **Inspire Transcendence:** Connect learning to greater meaning or service to others. *Application*: *Use service learning, peer mentoring, or community projects to cultivate purpose.*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design for IPEDS Survey Completion Inspired by Alexander Hamilton**

**Learning Objectives**

By the end of this training, participants will be able to:

* **LO1**: Interpret the structure and categories of the IPEDS survey using institutional language.
* **LO2**: Collaborate with peers to complete IPEDS sections accurately and efficiently.
* **LO3**: Reflect on how accurate reporting supports institutional integrity and broader educational goals.

**Instructional Strategies**

* **Address Physiological and Safety Needs**: Provide a clear, calm training environment with structured pacing and resource access.
* **Foster Belonging**: Use group work and storytelling to make participants feel part of a learning community.
* **Support Esteem and Confidence**: Scaffold tasks for early wins and use celebratory feedback à la Hamilton’s “I’m not throwing away my shot.”
* **Promote Cognitive Engagement**: Introduce case-based scenarios from real IPEDS reporting mistakes and let learners solve them.
* **Incorporate Aesthetic Elements**: Use Hamilton-style lyrical phrasing or rhythm-infused visuals to reinforce key concepts.
* **Encourage Self-Actualization**: Include open-ended challenges asking learners how they might improve institutional reporting processes.
* **Inspire Transcendence**: Emphasize how data transparency contributes to public trust in education, echoing Hamilton’s legacy of accountability and vision.

**Learning Activities**

* **“Write Your Way In” Warm-Up** (*supports Maslow’s base needs*): Learners journal about a time when data impacted a decision they cared about. It lowers affective filters and creates an open reflective space.
* **Peer Partnership Breakouts** (*assesses LO2*): Participants are assigned to duos (“duel teams”) to complete a practice IPEDS table in collaboration. They compare decisions, identify discrepancies, and improve data consistency.
* **Reporting Showcase** (*assesses LO1*): Small groups present on one survey component using stylized visuals and mnemonic-rich phrases, demonstrating accurate interpretation of structure and terminology.
* **Hamilton Quote Walk** (*supports confidence, cognition, and aesthetics*): Participants rotate around stations with quotes from the musical paired with data ethics prompts—e.g., “Who lives, who dies, who tells your data story?”
* **Vision Forward Reflection** (*assesses LO3*): Learners write a short “Data Federalist Paper” reflection describing how improved IPEDS reporting can better serve their institution and contribute to the greater good.

**Assessment Methods**

**Formative Assessments:**

* Feedback forms after collaborative tasks (supports LO2)
* Peer assessments on Reporting Showcase presentations
* Rubrics for scenario-based decision tasks, checking for correct interpretation (supports LO1)

**Summative Assessment:**

* **Final project**: Teams collaborate and submit a mock IPEDS entry and written rationale/interpretation connecting data choices to institutional goals (*assesses LO1 and LO2*).
* Individual reflections on how reporting accuracy contributes to institutional trust and mission (*assesses LO3*).

**Evaluation of Training Impact**

* Post-training survey measuring belonging, confidence, and clarity
* Self-assessment checklist aligned with Maslow’s motivational stages
* Optional follow-up: Each participant submits one proposed improvement for their department’s IPEDS process

**EXPLANATION OF INSTRUCTION**This instructional design is based on **Maslow’s Hierarchy of Needs** and brings in the relentless drive and imaginative energy of Lin-Manuel Miranda’s portrayal of Alexander Hamilton. Right from the beginning, learners are supported through **addressing physiological and safety needs** by establishing a structured, well-resourced training space that sets a calm but confident tone. As the lesson progresses, learners connect with each other through collaborative challenges and storytelling, helping to **foster belonging** and create a sense of shared mission.

Like Hamilton stepping onto the stage of history, participants are given chances to **build esteem and confidence** through scaffolded activities and affirming feedback that parallels Hamilton’s motto, “I am not throwing away my shot.” Engaging tasks built around real reporting missteps **promote cognitive engagement**, while **aesthetic elements**, such as lyric-inspired prompts or rhythm-based visuals, add a creative, memorable touch. The instructional experience ends in reflective writing and vision-setting to **encourage self-actualization** and **inspire transcendence**, reminding learners that accurate data isn’t just compliance–it’s part of something larger.

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Oar and Rubber Boot

Theory name: Keller’s ARCS Model

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* John M. Keller
  + Developed the ARCS Model of Motivational Design in 1987
  + Integrated principles from behaviorism, cognitivism, and humanistic psychology
  + Focused on creating systematic approaches to improving learner motivation

FUNDAMENTAL ASSUMPTIONS

* Motivation Can Be Designed
  + Instructional strategies can systematically influence learner motivation
* Motivation Is Multidimensional
  + Four key components: Attention, Relevance, Confidence, Satisfaction (ARCS)
* Motivation Aligns with Instructional Goals
  + Motivational strategies must be embedded purposefully within the instructional content and aligned with course objectives

DESIGN PROCESS

Instructional design using Keller’s ARCS model includes the following motivational strategies:

* **Gain Attention:** Capture and sustain interest. *Application*: *Use multimedia, real-world scenarios, inquiry-based prompts, and unexpected events.*
* **Establish Relevance:** Connect content to learners’ goals, needs, and experiences. *Application*: *Use authentic examples, personalized tasks, or show how learning applies to future roles.*
* **Build Confidence:** Increase learners’ belief in their ability to succeed. *Application*: *Scaffold content, offer practice with feedback, and allow learners to track progress.*
* **Ensure Satisfaction:** Reinforce success and promote intrinsic rewards. *Application*: *Use meaningful application tasks, recognition, and real-world outcomes.*

ARCS TEN-STEP DESIGN PROCESS

**Analyze**

1. Acquire course information
2. Acquire audience information
3. Analyze audience motivation level
4. Analyze motivational tactics in existing materials

**Design**

5. Define motivational objectives (ARCS)  
6. Identify potential strategies   
7. Design appropriate tactics   
8. Integrate motivational elements with instruction

**Develop**

1. Create instructional materials

**Evaluate**

1. Evaluate student motivation and instructional effectiveness

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design for IPEDS Survey Completion Inspired by Atticus Finch**

Learning Objectives

By the end of this training, participants will be able to:

* **LO1.** Identify the purpose and scope of the IPEDS survey using institutional language.
* **LO2.** Complete an assigned IPEDS section with attention to data accuracy and ethical reporting.
* **LO3.** Evaluate how IPEDS data can support educational equity and accountability.

ARCS Ten-Step Design Process

*Analyze*

1. **Acquire course information**: Content is grounded in the IPEDS Graduation Rates survey, selected for its relevance to institutional compliance and student success outcomes.
2. **Acquire audience information**: Participants are postsecondary administrators and data professionals, with varying levels of IPEDS experience.
3. **Analyze audience motivation level**: A pre-training poll captures learners’ confidence, challenges, and personal motivation for improving IPEDS accuracy.
4. **Analyze motivational tactics in existing materials**: Traditional materials (e.g., manuals, webinars) were reviewed and found to lack engagement, clarity, and connection to learners’ values.

*Design*

1. **Define motivational objectives**:
   * Gain Attention: Make IPEDS reporting feel urgent and personally meaningful.
   * Establish Relevance: Tie data work to institutional and student impact.
   * Build Confidence: Help learners feel equipped to succeed.
   * Ensure Satisfaction: Reinforce that their work matters.
2. **Identify potential strategies**: Use storytelling, ethical framing, scaffolding, peer support, and reflective prompts.
3. **Design appropriate tactics**: Include quote analysis, hands-on simulations, and guided reflection to support each ARCS element.
4. **Integrate motivational elements with instruction**: Strategies are embedded in each activity and assessment throughout the training.

*Develop*

1. **Create instructional materials**: Materials include narrative case studies, quote prompt slides, guided lab instructions, and peer mentorship tracking dashboards.

*Evaluate*

1. **Evaluate student motivation and instructional effectiveness**: Post-training surveys, peer feedback, and reflections are reviewed to assess shifts in motivation, knowledge, and ethical engagement.

Instructional Strategies (Mapped to ARCS)

* **Gain Attention**: Open with a true story of how misreported data negatively impacted student services. Use a short audio clip or visual timeline to draw participants in.
* **Establish Relevance**: Connect IPEDS reporting to real-world impact—how accurate data ensures resources go where they’re most needed, echoing Finch’s commitment to justice and truth.
* **Build Confidence**: Use scaffolding and modeling to walk learners through complex reporting sections with clarity and support.
* **Ensure Satisfaction**: End with a team celebration of completed tasks and a call to civic duty—linking quality reporting to institutional integrity.

Learning Activities

* **Opening Narrative & Quote Reflection (assesses LO1)**: Begin with an Atticus Finch quote—“You never really understand a person until you consider things from his point of view…”—paired with an anonymized case study of poor reporting. Learners identify, reflect, and connect to the moral and procedural purpose of IPEDS.
* **Guided Reporting Lab (assesses LO2)**: Learners complete a mock section with prompts and embedded help tools. Finch-style guidance appears as “quiet courage” tips: calm affirmations and structured feedback after each step.
* **Ethics Roundtable (assesses LO3)**: In groups, participants read and respond to short prompts about how data decisions affect students. Promotes dialogue and evaluation of ethics in reporting.
* **Progress Tracker & Peer Mentorship**: Learners track their growth with a visual dashboard and are paired with a mentor to support confidence, building a collegial learning culture.

Assessment Methods

**Formative:**

* Journal entries identifying and explaining the purpose of each IPEDS component (**LO1**)
* Completion confidence self-rating surveys before and after tasks (**LO2**)
* Peer feedback on mock reporting completion (**LO2**)

**Summative:**

* Group completion and submission of an IPEDS section simulation (**LO2**)
* Individual evaluation of and reflection on ethical responsibilities in reporting (**LO3**)
* Evaluative feedback loop connecting personal values to institutional outcomes (**LO3**)

Evaluation of Training Impact

* Post-training survey measuring motivation, confidence, and clarity
* Review of reflections for ethical insight and institutional alignment
* Follow-up mentoring check-in to evaluate long-term retention and satisfaction

**EXPLANATION OF INSTRUCTION**

This instructional design channels *To Kill a Mockingbird’s* Atticus Finch’s steadfast sense of duty, humility, and moral clarity to bring **Keller’s ARCS model** to life. It does this while following Keller’s full **ten-step motivational design process**. It begins by **analyzing course needs and learner motivations**, revealing that many participants feel disconnected from the broader value of their IPEDS work. To address this, training opens with an emotionally grounded story to **gain attention**, setting the stage for learning that’s both urgent and meaningful. **Relevance** is established through ethical framing and **personal connection**, helping learners understand how their efforts impact real students and decisions.

**Confidence** is built through **scaffolded practice**, **mentorship**, and **affirming feedback**, and learners close the session with a strong sense of **satisfaction** that comes from civic responsibility and shared purpose. Instructional strategies and materials are intentionally designed and developed to promote **motivation, autonomy, and ethical reflection**. The training is continuously evaluated not only for content mastery, but for increases in learner motivation, clarity, and commitment to institutional impact. Atticus would not expect perfection, but he would guide learners toward courage and growth.

A pair of rubber boots with crossed paddles

AI-generated content may be incorrect.

Oar and Rubber Boot

Theory name: Flow Theory

Part 1

*Use the H5P Reflection tool in the Pressbooks chapter for this theory to create Part 1. Then copy/paste here.*

*Part 1 answers:*

* Who are the *KEY THEORISTS* for this theory?
* What are the *FUNDAMENTAL ASSUMPTIONS* of this theory/model?
* What is the *DESIGN PROCESS* accompanying this theory/model?

KEY THEORISTS

* Mihaly Csikszentmihalyi
  + Developed Flow Theory as part of his work in positive psychology
  + Described flow as a mental state of deep immersion and enjoyment during optimal learning experiences

FUNDAMENTAL ASSUMPTIONS

* Flow Occurs in the Balance
  + Flow happens when challenge matches the learner’s skill level
  + If challenge is too low, boredom results; if too high, frustration occurs
* Engagement Is Deep and Intrinsic
  + The activity itself is intrinsically rewarding and leads to loss of self-consciousness
* Flow Enhances Learning
  + Optimal learning happens when learners are fully absorbed, focused, and in control

DESIGN PROCESS

Instructional design based on Flow Theory includes these strategies:

* **Set Clear Goals and Provide Immediate Feedback**: Structure learning activities around transparent objectives and timely responses. *Application: Use assignment rubrics, formative checks, and real-time tools like Kahoot or interactive polling.*
* **Balance Challenge with Skill**: Align task complexity with learner ability to keep them in the flow zone. *Application: Use adaptive learning paths, scaffolded tasks, or tiered levels of difficulty.*
* **Promote Learner Autonomy**: Empower learners to make choices about their learning process. *Application: Offer flexible pacing, choice in topics or formats, and opportunities for self-direction.*
* **Facilitate Deep Engagement through Action-Awareness Merging**: Design tasks where learners are so immersed they lose track of effort. *Application: Use hands-on learning, case simulations, or real-world design challenges.*
* **Minimize Distractions and Support Focused Concentration**: Create an environment that supports uninterrupted learning. *Application: Integrate focus techniques like Pomodoro intervals, structured workspace norms, or quiet thinking zones.*
* **Foster Risk-Taking and Loss of Self-Consciousness**: Build environments where students feel safe to experiment and fail forward. *Application: Use low-stakes trials, supportive group dynamics, and collaborative learning routines.*
* **Create the Conditions for Time Distortion**: Use immersive learning to make time “fly” during tasks. *Application: Incorporate game-like elements, escape rooms, and fast-paced design sprints.*
* **Design Self-Rewarding Activities**: Encourage intrinsic satisfaction through meaningful and enjoyable tasks. *Application: Tap into curiosity with open-ended inquiry, storytelling, or real-world application projects.*

Part 2

*DESIGN YOUR CHOSEN INSTRUCTION* (in outline format) *ACCORDING TO THIS THEORY/MODEL*.  *Make sure to label each part of the model clearly.*

**Instructional Design for IPEDS Survey Completion Inspired by Violet Crawley (The Dowager Countess)**

**Target Audience:** Postsecondary administrators responsible for IPEDS reporting  
**Training Topic:** Completing the IPEDS Graduation Rates Survey

**1. Learning Objectives**

By the end of this training, participants will be able to:  
**LO1.** Describe how maintaining flow can improve focus and accuracy in IPEDS data reporting tasks.  
**LO2.** Complete an IPEDS reporting task that aligns the cognitive challenge with your current skill level.

**LO3.** Reflect on your learning experience by noting when you felt most engaged during reporting and considering how to recreate that experience.

**2. Instructional Strategies**

* **Set Clear Goals and Provide Immediate Feedback** – Use rubrics and polling tools to anchor focus.
* **Balance Challenge with Skill** – Tasks gradually increase in complexity, matched to participant experience levels.
* **Promote Learner Autonomy** – Participants choose reporting topics, pacing, and feedback format.
* **Facilitate Deep Engagement through Action-Awareness Merging** – Use hands-on simulations and storytelling.
* **Minimize Distractions and Support Focused Concentration** – Timed work intervals and structured digital environments.
* **Foster Risk-Taking and Loss of Self-Consciousness** – Peer encouragement, low-stakes feedback.
* **Create the Conditions for Time Distortion** – Fast-paced design sprint challenges.
* **Design Self-Rewarding Activities** – Inject humor, relevance, and occasional dry wit—à la Violet Crawley.

**3. Learning Activities**

* **"Mind the Flow" Icebreaker (assesses LO1):** Participants hear a brief story narrated in Violet’s voice about a disastrous IPEDS error that occurred due to lack of focus. They then describe ways flow could’ve prevented the mistake.
* **Flow Mapping Activity (assesses LO3):** Learners reflect on and chart their personal moments of high focus during training and describe the conditions that made those moments engaging.
* **Progressive IPEDS Simulation (assesses LO2):** Participants complete three IPEDS data tasks, each increasing slightly in complexity. Real-time feedback and reflection questions keep them in the flow zone.
* **Dowager’s Design Sprint (supports LO2):** A time-limited team challenge where participants complete and submit mock data under pressure. Violet pops in (virtually, via quotes) with commentary to keep things sharp and witty.
* **Choice-Based Microlearning Path (supports LO2):** Participants select either a structured or exploratory version of the same task, promoting autonomy and increasing immersion.

**4. Assessment Methods**

**Formative Assessments:**

* Live poll reflection on the Violet scenario where learners describe the impact of flow (LO1).
* Flow Mapping Journal entries reflecting on ideal task conditions (LO3).
* Self-check rubrics during completion of simulation tasks (LO2).

**Summative Assessment:**

* Final IPEDS Task Completion/Submission scored with a flow-aligned rubric (accuracy, focus, engagement) (LO2).
* Short reflection explaining how participants managed to stay engaged, when they lost focus, and how they’d adjust next time (LO3).

**5. Evaluation of Training Impact**

* Post-training flow perception survey.
* Participant reflections on applying flow strategies to real IPEDS tasks.
* Optional follow-up poll 2–4 weeks later on whether they’ve changed how they approach high-focus reporting tasks.

**EXPLANATION OF INSTRUCTION**

This training utilizes Flow Theory to help learners feel more focused, energized, and motivated while reporting IPEDS data. It starts by setting **clear goals** and allowing for **immediate feedback** through rubrics and interactive polling tools. This establishes the mental structure needed for flow. Learners then progress through **scaffolded challenges** that align with their skill levels, ensuring the work is not too easy or not too overwhelming. This is done in order to **balance challenge with skill**. Along the way, participants choose their reporting topics, set their own pacing, and select how they’d like to receive feedback, supporting **learner autonomy**.

To help learners become fully focused, the instruction incorporates real-world simulations and narrative prompts that combine thinking and doing, thus facilitating **deep engagement** through **action-awareness merging**. With timed work intervals and structured digital tools, learners stay on task while **minimizing distractions**. Intentional but low-stakes peer feedback and subtle nudging from Violet Crawley encourage **risk-taking** and a **loss of self-consciousness**. As participants focus on fast-paced reporting challenges, they forget the clock, creating the conditions for **time distortion**. And of course, the entire experience is peppered with wit, relevance, and moments of surprise, to make each task feel **self-rewarding** in true Dowager fashion.