
[An Overview of Piaget's Theory of Cognitive Development]

Demonstration Storyboard by [Sharon Link, Ph.D.]

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Screen 1

Audio Narration

Narration: Hello and welcome to Overview of Piaget's Theory of Cognitive Development module.

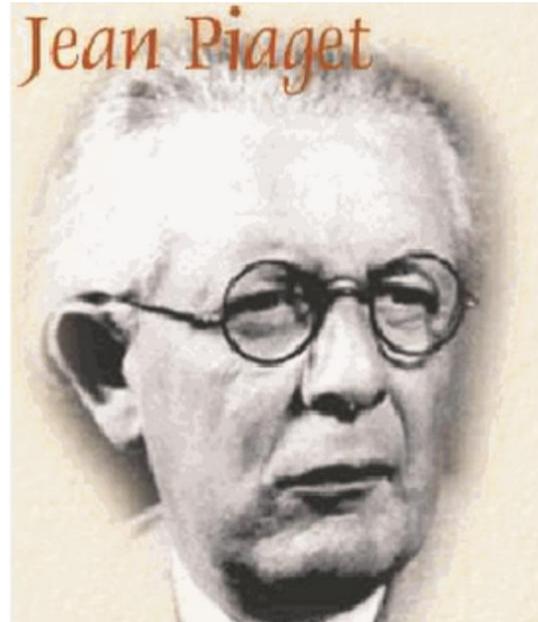
Jean Piaget remains unchallenged as one of the most influential psychologists in history. His detailed analyses of children's behavior at specific points in development remain a source of continued experimental and theoretical inspiration that adds to the profession of psychology.

This module examines the historical aspects of Piaget's work while presenting insights into how his work influences psychology today and specifically presents an overview of his Theory of Cognitive Development. You need to understand this theory, because it is still widely used in child psychology and education today.

(Please note: I can do VOs and the recordings. Typically I do this. However, I would recommend that you use a strong male voice)

Visuals

[Overview of Piaget's Theory of Cognitive Development]



Instructions for Interactivity

- Play narration
- Image of Piaget fades in when slide starts. After narration concludes, blue arrow illuminates indicating that participant should move to the next slide. 

Screen 2

Audio Narration

Narration: This module specifically examines the four stages of Piaget's Theory of Cognitive Development.

These stages include:

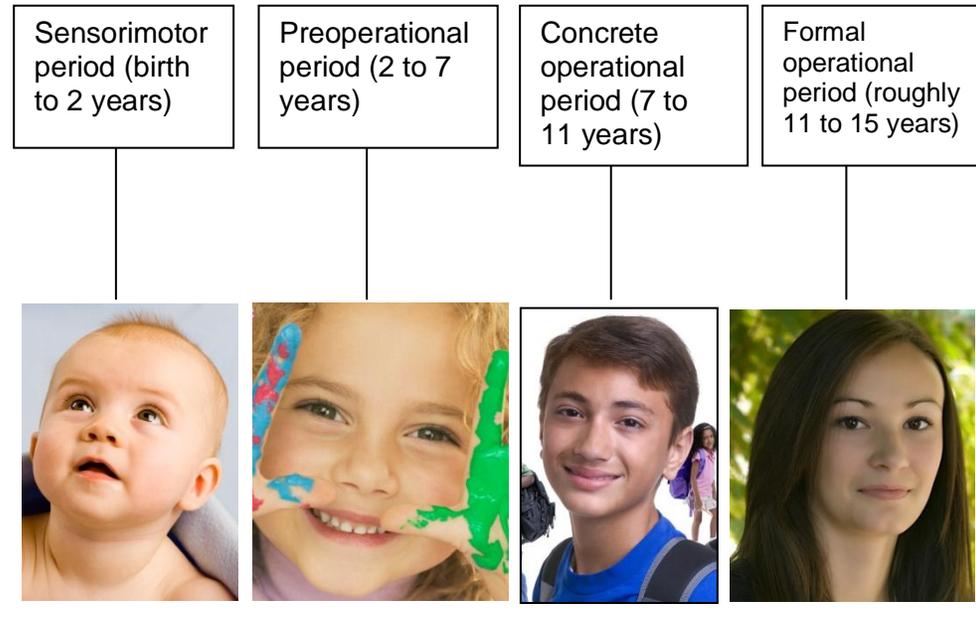
- 1. Sensorimotor period (birth to 2 years)*
- 2. Preoperational period (2 to 7 years)*
- 3. Concrete operational period (7 to 11 years)*
- 4. Formal operational period (roughly 11 to 15 years)*

We will examine each of the four developmental stages, explore an overview of each stage, and apply each of the stages to Interactions and scenarios presented throughout the module.

Enjoy this module, as you experience opportunities to reflectively journal, complete a few application activities, and watch the helpful videos and tutorials. Your final activities for this module will include a cross-comparative chart that classifies each stage and a Drag and Drop sequencing task.

Visuals

Getting Started



Instructions for Interactivity

- Narration starts with empty screen
- As each stage is explained, the child fades in and the line animates to box above describing stage.
- After narration concludes, blue arrow illuminates indicating that participant should move to the next slide.

Screen 3

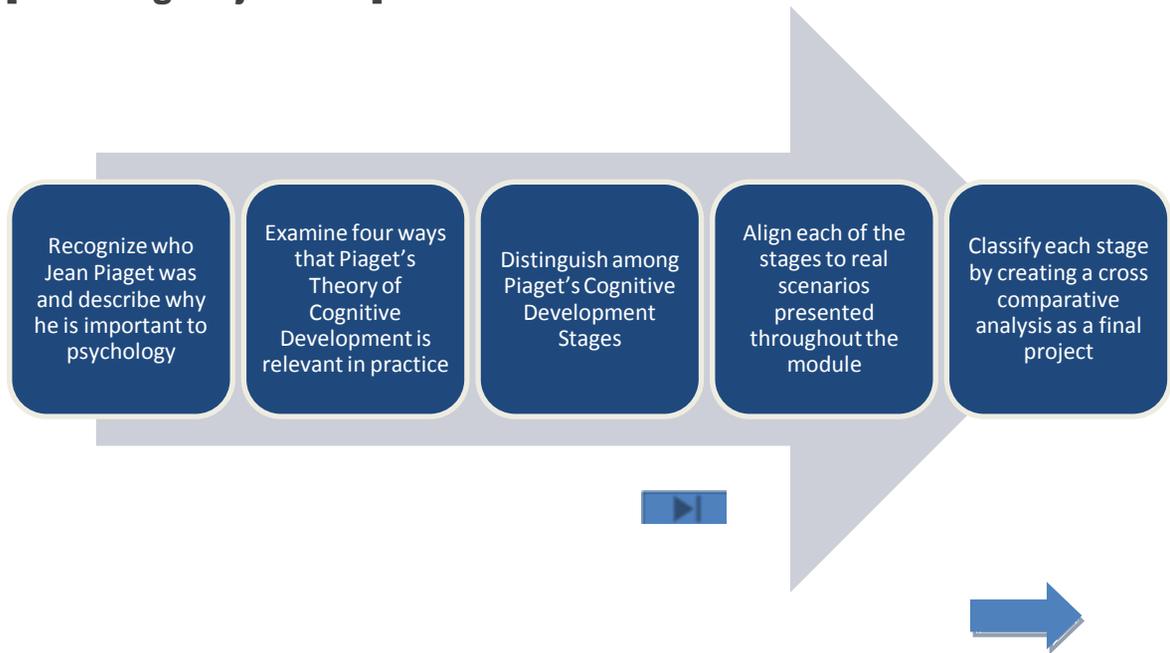
Audio Narration

Narration: *After completion of this module, you will be able to:*

- a) Recognize who Jean Piaget was and describe why he is important to psychology;
- b) Examine four ways that Piaget's Theory of Cognitive Development is relevant in practice;
- c) Distinguish among Piaget's Cognitive Development Stages;
- d) Align each of the stages to real scenarios presented throughout the module;
- e) Classify each stage by creating a cross comparative analysis as a final activity

Visuals

[Learning Objectives]



Instructions for Interactivity

- Embed play arrow and play narration and pause Interaction at “you will be able to”
- Play narration (a) as first corresponding box shows and is read. First box states: “Recognize who Jean Piaget was and describe why he is important to psychology”
- Play narration (b). Show second box “Examine why Piaget's Theory of Cognitive Development is relevant in practice.”
- Continue advancing through each progressive box as objectives are narrated.
- After narration concludes, blue arrow illuminates indicating that participant should move to the next slide.

Screen 4

Audio Narration

Narration: Before you progress further, let's find out what you know about Jean Piaget.

Please respond to the statements on the following True and False quiz to determine what you know about Jean Piaget and Cognitive Development Theory. After completing once and earning an 80%, you will advance to the next slide. If you earn less than 80% after completing a second time, you will still advance to the next slide.

Let's begin.

Visuals

[True/False Quiz]

Let's find out what you know about Jean Piaget. Please respond to the following True and False quiz below to determine what you know about Jean Piaget and Cognitive Development Theory. After completing once and earning an 80%, you will advance to next slide. If you earn less than 80%, you will still advance to the next slide.

1. Piaget did not believe that understanding new experiences grew out of what was learned from previous ones.

T F SL1

2. All people pass through each stage before starting the next one; no one skips any stage.

T F SL2

3. Piaget believed that children had to learn to imitate before they would learn to play.

T F SL3

4. Piaget concluded that children's speech can be classified into one of two types: socialized and observational speech.

T F SL4

5. According to Time Magazine (1999), Piaget was labeled as one of the top 100 most influential people of the twentieth century.

T F SL5

6. There is 100% agreement regarding Piaget's theories and everyone agrees with him.

T F SL7



Instructions for Interactivity

- [Please note that each T/F button is an attached comment which should be in an Interaction that shows answer and more in-depth comment.]
- Learner would read through first question and click on True or False.
- The correct answer should contain an Interaction that indicates whether the response is True/ False.
- After completing once and earning an 80%, student advances to next slide.
- After completing twice and earning less than 80%, student advances to next slide.
- Blue arrow illuminates indicating that participant should move to the next slide.

Screen 5

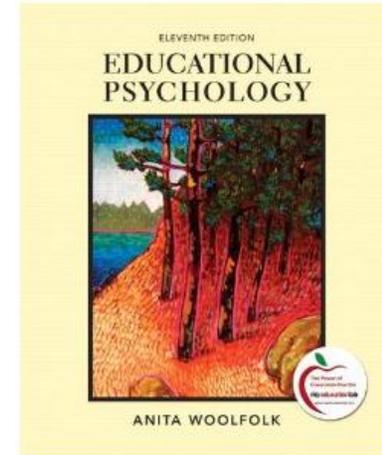
Audio Narration

After completing the True/False Quiz, please take some time to explore your assigned reading to learn more about Piaget's theories. Please remember that this module is only about one of the Cognitive Development Psychologists that you will be learning about during this entire course.

(Please note: the textbook does not have to be assigned. If reading will be assigned, this is where I would assign the reading. Also note that assigned reading would align to different parts of the lesson.)

Visuals

[Let's Do Some Reading]



Instructions for Interactivity

- Play narration and animate to show page turning.
- Textbook illuminates in upper right corner as narration of word “reading” begins.
- After narration concludes, blue arrow illuminates indicating that participant should move to the next slide.

Screen 6

Audio Narration

Narration: Now that you have taken the pre-quiz and have completed your assigned reading, let's learn about Cognitive Development Theory.

According to Piaget (1952), children must reconstruct their own understanding of phenomena through active construction and reflection. Piaget (1960) argued that there were four stages of cognitive development. Again, these stages are progressive and sequenced and include:

Sensorimotor (Birth to 2 year old)

Pre-Operational (2 to 7 years old)

Concrete operation (7 years old to adolescence)

Formal Operation (Adolescent to adult)

Visuals

[Let's Learn More]



Instructions for Interactivity

- Play narration and animate to show baby walking.
- After narration concludes, blue arrow illuminates indicating that participant should move to the next slide. 
- Transitional slide is added next to indicate that it is time to transition to next part of the lesson.

Screen 7

Audio Narration

Narration: If you have watched a baby, you have observed the Sensorimotor stage of Piaget's Theory of Cognitive Development.

During the Sensorimotor stage, which extends from birth to two years of age, children learn about their relationship to different objects. They learn to hold objects. During this stage, children begin to think about events that are not immediately present. There are six Substages within the Sensorimotor stage.

Substage 1: (Birth to 1 Month) is called the Reflex Stage

During this stage infants suck and grasp. These instinctual behaviors are driven to keep the infant alive.

What would happen if a baby was born without these instincts?

Visuals

[Substage 1: (Birth to 1 Month) - Reflex Stage]



Substage 1: (Birth to 1 Month) - Reflex Stage

During this stage infants, suck and grasp. These instinctual behaviors are driven to keep the infant alive.

You can see here a very tiny infant in Substage 1.



Instructions for Interactivity

- Play narration.
- Animate to show baby flex and mouth move. Play button is enabled.
- After narration concludes, blue arrow illuminates indicating that participant should move to the next slide.

Screen 8

Audio Narration

Narration: The second Substage of the Sensorimotor stage takes place from 1 to 4 months and is called Primary Circular Reactions.

During this stage, infants are able to combine reflexes with more complex actions. They might open their hand, close their hand, and place their fist into their mouth.

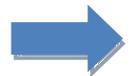
Visuals

[Substage 2: (1 to 4 Months) - Primary Circular Reactions]



Substage 2: (1 to 4 Months) - Primary Circular Reactions

During this stage, infants are able to combine reflexes with more complex actions. They might open their hand, close their hand, and place their fist into their mouth.



Instructions for Interactivity

- Play narration.
- Animate to show baby's hand open and close to make fist.
- Show baby's fist move towards mouth.
- Advancement arrow flickers when narration is done.

Screen 9

Audio Narration

Narration: The third Substage of the Sensorimotor stage is called Secondary Circular Reaction.

During this stage, infants begin to notice that their behaviors directly impact other people or the environment around them.

For example, if you have seen an infant pick up a stuffed animal and then immediately drop it only to be picked up again, you are watching Substage 3.

Visuals

[Substage 3: (4 to 8 Months) Secondary Circular Reactions]



**Substage 3: (4 to 8 Months)
Secondary Circular
Reactions**

During this stage, infants begin to notice their behaviors directly impact other people or the environment around them. For example, if you have seen an infant pick up a stuffed animal and then immediately drop it only to be picked up again, you are watching Substage 3.



Instructions for Interactivity

- Play narration.
- Animate to show pacifier dropping from mouth while narration is being read.
- Advancement arrow flickers when narration is done.

Screen 10

Audio Narration

Narration: The fourth Substage of the Sensorimotor stage is called Coordination of Secondary Circular Reactions (8 - 12 Months)

During this stage, babies begin to observe that certain actions lead to consequences. They engage in "goal directed" behavior and eventually acquire "object permanence." They realize that even if a parent or physical object leaves the room; the object continues to exist. During this stage, hide and seek is a fun activity.

To help babies advance during this stage, caregivers should increase the amount of time the child engages in different types of play. Children at this age can begin getting ready for the other stages if caregivers play hide-and-seek, peek-a-boo, and other types of hiding games in which the child observes leaving and returning.

Visuals

[Coordination of Secondary Circular Reactions (8 - 12 Months)]



Substage 4: Coordination of Secondary Circular Reactions (8 - 12 Months)

Babies during this stage, observe that certain actions lead to consequences. They engage in 'goal directed' behavior and eventually acquire 'object permanence.' They realize that even if a parent or physical object leaves the room; the object continues to exist. During this stage, hide and seek is a fun activity.



Instructions for Interactivity

- Play narration.
- Animate to show baby moving closer to computer while narration is being read.
- Play wav file of baby laughing as baby looks at computer screen. Embed play arrow to control animation.
- Advancement arrow flickers when narration is done.

Screen 11

Audio Narration

Narration: The fifth Substage of the Sensorimotor stage is called Tertiary Circular Reactions (12 - 18 Months)

During this stage, infants show increased flexibility and creativity. The term "tertiary" specifically refers to these types of versatile behaviors.

During this stage, it would be helpful for parents or caregivers to engage in creative play that engages the child. Read to the child often. Explain what you are reading. Even though, it might not seem that the child may understand, their level of understanding is developing rapidly.

Visuals

[Tertiary Circular Reactions (12 - 18 Months)]

Sensorimotor Stage 5



Substage 5: Tertiary Circular Reactions (12 - 18 Months)

During this stage, infants show increased flexibility and creativity. The term "tertiary" specifically refers to these types of versatile behaviors.



MS910220041[1].wav

Instructions for Interactivity

- Play narration.
- While narration plays slowly add .wav file of baby crying
- Fade cries out after 10 seconds. (Sound could get old.)
- Advancement arrow flickers when narration is done.
- Transition slide is included and states: (Spotlight Scenario)

Screen 12

Audio Narration

Narration: Piaget watched his own daughter, Jacqueline, and made conclusions regarding her development. He then made assumptions about other children's development based on his observations. The following is an excerpt from Piaget's book. [Jacqueline holds in her hands an object which is new to her; a round, flat box which she turns all over, shakes, rubs against the bassinet, etc. She lets it go and tries to pick it up. But she only succeeds in touching it with her index finger, without grasping it. She nevertheless makes an attempt and presses on the edge. The box then tilts up and falls again. Jacqueline, very much interested in this fortuitous result, immediately applies herself to studying it....

She amuses herself with this game and keeps it up (resumes it after intervals, etc.) for several minutes. Then, changing the point of contact, she finally again places her finger on the edge of the box, which tilts it up. She repeats this many times, varying the conditions, but keeping track of her discovery: now she only presses on the edge! (Piaget, 1952, p. 272)]

What conclusions can be made regarding Jacqueline and other children you have observed?

Visuals

[Piaget's Daughter- Jacqueline]



Jacqueline

Piaget watched his own daughter, Jacqueline, and made conclusions regarding her development. He then generalized about other children's development based on his observations.



Instructions for Interactivity

- Please repair Jacqueline's image on slide so that text on book faces correctly.
- Animate Piaget's image so that it appears that he is observing his daughter.
- Play narration with play arrow.
- Advancement arrow flickers when narration is done.
- Transition slide is added after this slide and states: "Back to the lesson"

Screen 13

Audio Narration

The sixth Substage of the Sensorimotor stage is called Mental Representation, which lasts from (18 to 24 Months).

During this stage, Piaget indicated that children develop symbolic thought. They imitate. They begin to engage in pretend play.

Even as adults, Piaget contended that we use behaviors that were acquired during the Sensorimotor stage to interact with our environment.

Consider some of the different types of pretend play that you would use with a child at this stage. What would you suggest to a parent who has a child at this stage?

Visuals

[Mental Representation (18 to 24 Months)]

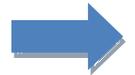
Sensorimotor Stage 6



Substage 6: Mental Representation (18 to 24 Months)

During this stage, Piaget indicated that children develop symbolic thought. They imitate. They begin to engage in pretend play.

Even as adults, Piaget contended that we use behaviors that we acquired during infancy to interact with our environment.



Instructions for Interactivity

- Play narration using embedded play arrow.
- Animate to show toddler wobbling.
- Advancement arrow flickers when narration is done.

Screen 14

Audio Narration

Narration: *Let's take some time now to reflect on what you have been learning. Complete the Let's Reflect Journal Activity. Please think about the questions on the slide. When you are done, click on the Let's Reflect tab to determine how many children should have been observed in Piaget's work to gather sound data. What did you find out?*

Thinking back through the previous Interactions, you have been learning about the different stages of Piaget's Theory of Cognitive Development. You have also learned about the different Substages that occur during phases of infancy. Most importantly, you learned that Piaget (1952) used his own daughter as an observed subject. Piaget then made generalizations to other children and their development based on what he observed about his own daughter.

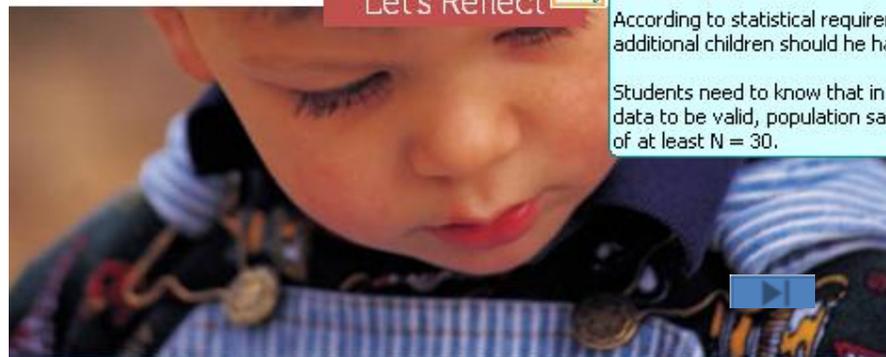
What are the implications of Piaget's (1952) theories if he only observed his own daughter based on what you learned about working with appropriate sample size?

Visuals

[Let's Reflect]

You have been learning about the different stages of Piaget's Theory of Cognitive Development. You have also learned about the different Substages that occur during different phases of infancy. Most importantly, you learned that Piaget (1952) used his own daughter as an observed subject. He then made generalizations to other children and their development based on what he observed regarding his daughter.

What are the implications of Piaget's (1952) theories if he only observed his own daughter? According to statistical requirements, how many additional children should he have observed?



Let's Reflect

SLB

Sharon Link

5/15/2014

According to statistical requirements, how many additional children should he have observed?

Students need to know that in order for statistical data to be valid, population sample should consist of at least $N = 30$.

Instructions for Interactivity

- Play narration, use embedded player arrow.
- If participants have the opportunity to write reflectively, they will be able to respond in the Journal Entry box. If they aren't able to respond, students should simply think about this question and subsequent response.
- Create Interaction so that "Let's Reflect" includes text and includes information.
- Advancement arrow flickers when narration is complete and after participants have clicked on the Let's Reflect tab.

Screen 15

Audio Narration

Narration: *Time to move forward. To learn more about other Stages of Piaget's Theory of Cognitive Development. Please watch the video that is embedded here. When you are done, you will learn more about the Pre-Operational Stage and then be able to complete an Application Activity.*

Now think Reflectively: What conclusions can you make regarding the children in the video and other children that you have personally observed going through these different stages?

Visuals

[Video: Piaget's Stages of Development]



Instructions for Interactivity

- Play narration.
- Embed video so that video starts when participant selects start. Please note that video should not start automatically. To prevent video from starting automatically, please embed this code: `<iframe width="420" height="315" src="//www.youtube.com/embed/TRF27F2bn-A"#t=XXmYYs frameborder="0" allowfullscreen></iframe>`
- Advancement arrow flickers when video is done.
- (Please note: we need to inquire whether special authorization is needed to use video.)

Screen 16

Audio Narration

Narration: During the ages of 2 to 7 years old, children are experiencing the Preoperational stage and make great strides in their ability to communicate. While they engage in pretend play and make-believe games, their thinking is still very concrete. Especially from the perspective of spatial understanding, children at this stage are limited in their ability to see the relationship between mental representations of actions and ways those symbols obey logical rules.

Most of all, children at this stage are unable to conserve. "Conservation" refers to the specific idea that the physical characteristics of objects remain the same even if the outward appearance changes. Rigid in their thinking, children at this age are unable to make this connection.

You saw examples of these different types of reasoning during the video in the previous slide. To conclude, the greatest challenge that many theorists have with Piaget's theory is that children can only learn through acting on their environment.

Visuals

[Pre-Operational Stage – Ages 2 yrs to 7 yrs)



Instructions for Interactivity

- Play narration.
- Animate to show cups appear and “flatten” so that perspective is correct. Source larger glass JPGs
- Animate to show girls eyes move to look at cups.
- Advancement arrow flickers when narration and animation are complete.
- Transition slide is added that reads “Application Activity”

Screen 17

Audio Narration

Narration: For this application activity, please review the video, and pay special attention to minutes 54 through 1:26. The little girl in the video is in the Pre-Operational stage. She is experimenting with Piaget's Water Jar Task – Conservation of Liquid Quantity.

You will now be able to participate in the following 15 minute activity demonstrating this phenomenon. While you experience this Interaction, think about a child you know and ways you would use this Interaction to advance a child to the stage of Cognitive Development Theory.

Visuals

[Application Activity: Water Jar Task Conservation of Liquid Quantity]

Piaget's Water Jar Task—Conservation of Liquid Quantity

Piaget's Water Jar Task—
Conservation of Liquid Quantity

By Thomas E. Ludwig, Hope College

This activity will take about 15
minutes to complete

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Produced by CADRE design



http://ebooks.bfwpub.com/psychinquiry/shell.php?activity=piagets_water_jar

Instructions for Interactivity

- Embed play arrow to play narration.
- Embed URL to presentation so that participants can complete. If URL is a mash-up, then URL should be targeted to _blank so that presentation displays inside the LMS environment.
- Separate presentation of same activity can also be built within course as an “Interactive with an Interactive.”
- Advancement arrow flickers when activity is done.

Screen 18

Audio Narration

Narration: The remaining narrations would include details regarding additional activities and Interactions.

Visuals

[Final Slides]

The successive slides would follow a similar pattern that has already been demonstrated. Rather than build out the rest of the course, I will explain...

- 1) *Write scripts for audio narrations for remaining stages and slides;*
- 2) *I typically produce a minimum of 25 and maximum of 40 slides for a Module, which would be added to demonstrate remainder of lesson;*
- 3) *Typically, my lesson design includes “chunks” of information, followed by an activity or opportunity to reflect, and then concludes by some type of assessment at the end.*
- 4) *I would also consider using of this video of Piaget <http://www.youtube.com/watch?v=l1JWr4G8YLM> considering fair use.*
- 5) *Final activity for this module is a cross-comparative chart that classifies each stage.*
- 6) *For this type of Module, I would also include a Drag and Drop Activity as the final activity in which participants would appropriately sequence the different stages and their attributes.*
- 7) *Please note at the same time I was developing this Storyboard, I also used PPT to source images and begin building the template. This template would then be imported into Articulate Studio '13 or Storyline – I own Studio '13 – which would expand the module.*

Instructions for Interactivity

- Play narration. Use this arrow to start animations/narrations 
- Animate remaining slides.
- Build Drag and Drop quiz activity.
- Show final tips for working with students at their different stages.
- Advancement arrows flicker when Interactions are complete. 