Jerome Bruner





Objectives

- Acquire Knowledge of the process of Discovery Learning Theory.
- Understand the principles of discovery learning.
- Understanding about the stages of cognitive learning theory
- Apply the implication about Bruner's Discovery Learning Theory.

Biographical Sketch

- •Born in New York City on October 1, 1915
- •A.B. Duke University (1937)
- •A.M. Harvard University (1939)
- •Ph.D. Harvard University (1941)
- •United States Army's Intelligence Corps (1942-45)
- •Harvard University (1945-1972)

Biographical Sketch (...cont.)

- •Established Center for Cognitive Studies in (1960) Director (1960-72)
- •President of the American Psychological Association (1964-65)
- •Oxford University (1972-80) Watts Professor of Experimental Psychology
- •NYU Law School (1991-present). Research
- Professor of Psychology

Discovery Learning Theory

"an approach to instruction through which students interact with their environment—by exploring and manipulating objects, wrestling with questions and controversies, or performing experiments" (Ormrod, 2001, p.442).

Cognitive Learning Theory

Discovery Learning

 Bruner said anybody can learn anything at any age, provided it is stated in terms they can understand.





Cognitive Learning Theory

- Discovery Learning
 - Powerful Concepts (not isolated facts)

 a. Transfer to many different situations
b. Only possible through Discovery Learning
c. Confront the learner with problems and help them find solutions. Do not present sequenced materials.
Process of learning is imp- learning to learn

PRINCIPLES OF LEARNING

- READINESS
- SELECTION, SEQUENCING N STRUCTURING
- IMPORTANCE OF REINFORCEMENT
- GOAL ACHIEVEMENT

MODES OF REPRESENTATION

Enactive Stage

- From birth to about age 3.
- Children need to experience the concrete.
- Usually involves a motor response.
- Children use actions to manipulate objects.
- Objects are defined by what they can do with them.
- Showing and modeling is important versus telling at this stage.

Iconic Stage

- From about age 3 to about age 8
- Children are able to think about things that are not physically present
- Images are primarily visual or based in another sense

• Ex. They can do math problems in their head.

Symbolic Representation Stage

- This stage occurs at about age 7
- Bruner believes that in this stage, children are able to transform action and image into a symbolic system to encode knowledge
- The "symbols" are primarily linguistic and mathematical
- Symbolic Representation is a major tool in reflective thinking

Symbolic Representation In Action

Young students would see a teacher fill a glass of one shape with water and then transfer that water into a glass of another shape. The students would say that because the glasses were different shapes, there is a different amount of water. Students that can understand Symbolic Representation are able to understand that the glasses have the same amount of water.

In Conclusion...

Bruner believed that students learn best through discovery and a spiraled curriculum.

- He said that knowing is a process rather than the accumulated knowledge as acquired in textbooks
- Bruner believed that we should instruct students to use the tools, instruments, and technologies available to them to unlock their potential

How Would Bruner Look In The Classroom

- Inquiry-Based Science Lessons students would be expected to investigate a hypothesis
- Lessons involve both collabora and internalization, with teach support provided throughout
- A sample lesson plan, following Bruner's theory, has been crea Huntington College and appears at right

Anatomy of a Lesson Plan

Title: Pearl Harbor Time: 90 min.

Materials: VCR, tape, poster, pictures

Objectives: 1. The student will summarize reasons for U.S. entrance into WWII. 2. The student will evaluate the pros and cons of these reasons.

<u>Setting the stage:</u> Show pictures of Pearl Harbor bombing.

Discuss: Background from h.w. reading.

Construct: Time line of WWII events.

<u>Groups:</u> Posit "legitimate" reasons for a country to go to war. Refer to textbook and previous class notes.

Show: anti-Japan & anti-German posters and newsclips (video)

<u>Journal:</u> What role did emotions play in the U.S. entrance into WWII? Defend or critique the reasons for going to war.

Check your progress

- What is discovery learning by Bruner?
- What are the educational implications of discovery learning?
- How does Bruner's theory influence current practice?
- What are the principles of Discovery learning theory?

References And Links

http://www.huntington.edu/education/lessonplanning/images/a natomy_la_ani.gif

http://evolution.massey.ac.nz/assign2/BP/Bruner.html

Ormrod, J. (2001).

Educational psychology: Developing learners (3rd ed.), p. 442. Upper Saddle River, NJ: Merrill/Prentice Hall.