

Concept Development Model

BACKGROUND

The Concept Inductive or Inductive Model emphasizes how concepts are refined. It builds on basic concepts, which are part of the learner's prior knowledge, and as conceptual interrelationships develop, a framework for new understanding is established. The word concept refers not only to the object itself, but also to those attributes that make up one's notion of the object. Jerome Bruner noted that when one sees an object that it is red, shiny and roundish and makes the inference that it is an apple, one is then enabled to infer further that "if it is an apple, it is also edible, juicy, will rot if left unrefrigerated. The working definition of a concept is the network or inferences that are or may be set into play by an act of categorization."

Bruner further states, "that virtually all cognitive activity involves and is dependent on the process of categorizing." Hilda Taba originated the concept development model. She emphasized that the mental processes a person employs to select attributes and arrive at his or her idea of what an object is are identical to the processes involved in arriving at more abstract ideas. The model teaches students to make observations, form different types of inferences from these observations, group data on the basis or perceived similarities, then form categories and labels for the data, producing a conceptual system. Taba has identified three inductive thinking tasks and developed these teaching strategies to induce these tasks.

1. Concept Formation

- Identifying ideas and associations
- Grouping the items based on similarities
- Developing categories and labels for groups

2. Interpretation of Data

- Identifying critical relationships
- Exploring relationship (regrouping)
- Making inferences

3. Application of Principles

- Predicting consequences (What should happen if?)
- Explaining predictions
- Verifying predictions

References:

- Joyce, B. and Weil, M. *Models of Teaching*, Eighth Edition. Pearson
- Skoog, G. and Lein, V. *Strategies for Teaching Physical Science*. Texas Tech University