Guided Discovery Style-F

Description of a Guided Discovery Style*

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>
> *What classroom image would you see between the teacher and learners that would indicate the structure of the Guided Discovery Style?*

In Style F you would see the teacher asking one student a series of specifically sequenced questions** with only one correct answer per question. The questions are sequenced in a logical pattern so that each answer leads the student step-by-step to discover the anticipated concept, principle, relationship or solution.

Content appropriate for Guided Discovery includes principles, rules, concepts, and relationships. Examples of inappropriate discovery content include isolated facts, skills, dates, names. These content examples cannot be discovered. Guided Discovery episodes are relatively short lasting about 5-10 minutes. Style F does not provide practice skill development. Style F focuses on clarifying principles, concepts, rules and relationships, which can improve skill performance when practicing in Styles A-E.

**There are cognitive liabilities when this style is used in a large group. The discovery process is interrupted per student in a group setting; therefore, the content acquisition cannot be guaranteed for each student.

* The content in this style is new and not known in advance to the learner. Styles F-K promote different structures for discovery learning and different cognitive operations.

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Learning Focus

The learning focus of the Guided Discovery Style is to develop logical and sequential thinking. In this style questions are designed in a logical and sequential series that leads a learner to discover a predetermined concept, principle, relationship or rule that was not previously known.

Q1: Define balance.
Q2: Place yourself in maximum balance.
Q3: I'm going to check to see if this is your most balanced position by giving you a little push.
Q4: Now, arrange yourself in a position that is a little less balanced.
Q5: Move to another position that is even less balanced.
Q6: What's your least balanced position?

TARGET CONCEPT:

A wide based, low position is more balanced and stable than a narrow-based, high position.

State the difference between your most balanced and your least balanced position.

* All subject matter has content that is appropriate for the different teaching styles. Physical activities were selected to more visually convey the decision making concept of each style.

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The Anatomy

In the Anatomy of the Guided Discovery Style, the role of the teacher (T) is to make all subject matter decisions, including the target concept to be discovered and the sequential design of the questions for the learner. The role of the learner (L) is to discover the answers. This implies that the learner makes decisions about segments of the subject matter within the topic selected by the teacher.

Pre-Impact   (T)
(planning)

Impact $\longrightarrow$ (T$_L$)
(implementation)

Post Impact $\longrightarrow$ (T$_L$)
(feedback and assessment)
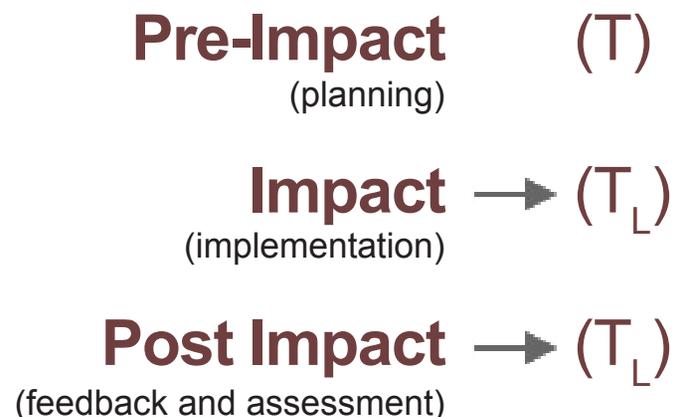
✱ The arrows represent the decision shifts from the Inclusion Style-E to the Guided Discovery Style-F.

Style Summary

In the Guided Discovery Style, the role of the teacher is to make all subject matter decisions, including the target concept to be discovered and the sequential questions that lead to the target answer. The role of the learner is to accept guidance to discover the answer. This process implies that the learner makes decisions about segments of the subject matter within the topic. This sequential process invites the learner to make meaningful cognitive connections that lead to the discovery of new content, including a concept, principle, relationship or rule.

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Subject Matter Objectives

When the Guided Discovery Style is achieved, the following subject matter objectives are reached:

▸ To discover the interconnection of steps within a given task

▸ To discover the "target" the concept, principle, rule

▸ To experience a step-by-step discovery process and develop sequential discovery skills that logically lead to broader concepts

▸ Others

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Behavior Objectives

When the Guided Discovery Style is achieved, the following behavioral objectives are reached:

▸ To cross the discovery threshold

▸ To engage the learner in the discovery of concepts and principles representing convergent thinking

▸ To engage the learner in a precise cognitive relationship between the stimulus (given by the teacher or surrogate) and discovered response

▸ To teach both teacher and learner about cognitive economy - i.e., using minimal, accurate, and logical steps to get to a target

▸ To develop an effective and affective climate conducive to engagement in the act of discovery

▸ To provide the learner with the moment of "Eureka"

▸ Others