Effective Teaching is Effective Planning

It is said that effective teachers are good at planning. They set clear learning objectives for each lesson, and they are systematic in their preparation and execution of each lesson.

The key to an effective lesson plan requires the teacher to have a sound knowledge of the curriculum material and deep understanding of student learning. Thus, when planning a lesson, the teacher must take into account ...

- what should be taught,
- how should it be taught, and
- how should the learning be assessed.

Lesson planning is a very structured approach. It begins with a review of previous learning and an overview of the objectives of the lesson. The focus of any lesson plan should be on student learning outcomes.

PLANNING FOR EFFECTIVE TEACHING AND SUCCESSFUL LEARNING

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Components of 5E

Engagement

In this phase, the teacher should engage the students in the learning by providing an opportunity to mentally focus on an object, problem, or situation related to the lesson. A successful engagement results in students experiencing a cognitive disequilibrium with a psychological need to continue to find out more.

Exploration

This phase should be planned to initiate the process of re-establishing the cognitive equilibrium. The teacher should provide students with the opportunity to formulate relationships, observe patterns, identify variables, and question events. Ideally, an exploration should give students concrete experiences to continue formulating concepts, processes, and skills.

Explanation

This phase should be planned to ensure that the concepts, processes, or skills become plane, comprehensible, and clear. This phase should provide students and the teacher with a common use of terms relative to the learning task. This phase should be planned with appropriate probing questions to direct students' attention to specific aspects of the engagement and exploration experience. It also requires the teacher to introduce scientific and technical explanations in a direct, explicit, and formal manner.

Elaboration

This phase should be planned to enable students to transfer concepts to closely related, yet new situations. The teacher must bear in mind that even at this stage, mastery of the concepts may not have been achieved by all students.

Evaluation

This is the phase of the planning where the teacher ensures that students receive feedback on the adequacy of their exploration. Formative assessment should occur throughout the 5E sequence. A summative assessment may occur at the end.

Making Learning Visible

Planning the 5E sequence for effective teaching can only begin once the teacher has identified the learning objectives for the lesson or the unit of work. Three things to note about learning objectives are:

1. They should be clear, observable, and measurable.
2. They should describe what the learner should be able to do upon completion of the lesson or the unit of work.
3. They should be shared with the learner making the learning visible.

Making learning visible means students should be clear as to what they are doing, where they are going, and how they will know when they have achieved the objectives of the lesson.

UTeach Approach to Lesson Planning

UTeach utilizes the 5E instructional model, developed by the Biological Sciences Curriculum Study (BSCS), to teach the UTeach interns to plan and implement effective mathematics and science lessons.

Components of 5E

Evaluate → Engage

Elaborate → Explore

Elaborate → Explain

The 5E instructional model consists of the following phases:

- Engagement
- Exploration
- Elaboration
- Explanation
- Evaluation

This instructional model has been used in the design of the BSCS curriculum material since 1998 and it describes a learning sequence that can be used for entire programs, specific units, and individual lessons. The effectiveness of the 5E instructional model is supported by contemporary research on student learning, particularly in the sciences. The foundation of this support comes through reports published by the National Research Council (NRC) (BSCS, 2006).

References