

Shaping a Future Through an Inquiry- Centered Classroom

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Abstract:-

All children are scientists. They use the same process and skills, as scientists do, but on a simpler level. They may not realize it. When children observe, they use their five senses- seeing, hearing, smelling, tasting and touching – to collect data about the things around them and continue to list their ideas, beliefs and models. Learning through inquiry, empower students with the skills and knowledge to become independent, life-long learners, Hunkins (1995) says, “The method of inquiry give students the opportunity to meet problems and generate and test ideas for themselves.” The teacher’s role in a classroom is not only to teach but to motivate students to learn. An inquiry-centered classroom provides the opportunity of skillful and innovative learning for the students. The present paper focus on the scenario of the inquiry-centered classroom.

Key words – An inquiry-centered classroom.

Introduction about An Inquiry- centered classroom

The inquiry classroom environment is somewhat different from traditional settings. Inquiry classrooms are often described as learner-centered and interactive. Inquiry is the science, art and spirit of imagination. It can be defined as the scientific process of active investigation by which we use critical, logical and creative thinking skills to raise and engage in questions of personal interests. Inquiry investigations usually involve, generating question or problem to be solved, choosing a course of actions and carrying out the procedures of the investigation, gathering and recording the data through observation and instrumentation to draw appropriate conclusions. In construction newly formed knowledge, students are generally cycled back into the process and pathways of inquiry with new questions and differences to investigate.

Constructivism Today

Constructivism today has an more and more significant impact on educational reform. According to constructivists’ philosophy, knowledge is not imparted from one individual to another. In the constructivist sense, the child’s knowledge is a result of his or her experience and children learn to make using their senses. They draw conclusions about the cause and effect phenomena that they experience. These interpretations lead the child to form theories about how the world operates. Constructivist teachers see learning as a process by which the child is a theory builder.

The role of the student is at the centre of inquiry-based learning. The basic theory underlying in inquiry-based learning is constructivism.

Pupil as a Researcher

Curiosity and imagination are the heart of inquiry. They pump questions through learner. When students act as researchers in inquiry classrooms, they take on new roles. Acting as researchers needs students to use integrated process skills such as identifying variables, writing hypothesis, designing experiments and investigations, constructing data tables and graphs and analyzing the relationship between variables.

According to the National Science Education Standards (NRC, 1996), in challenging students to accept and share responsibility for their work, “Teachers should make it that each must take

responsibility for his or her work. Teachers also create opportunities for their own learning, individually and as members of the group.

Group work allows students to build self-confidence, promoting positive interdependence by dividing the workload, providing joint rewards, holding individuals accountable and getting students actively involved in helping each other (Adams and Hamm 1998).

In 1991, a project titled Vermont Elementary Science Project (VESP), was conducted by Trinity College in Burlington to study inquiry-based learning. According to VESP, when students are doing inquiry-based learning, the observer will see the following.

The students:

- vies themselves as scientists in the process of learning
- accept an 'invitation to learn' and readily engage on the exploration process.
- Plan and carry out investigations
- Communicate using a variety of methods
- Purpose explanations and solutions and build a store of concepts
- Raise questions
- Make connection to previously held ideas
- Critique their scientific practices

Teacher in an Inquiry-Centred Classroom

The Teacher's behavior and competency are paramount in inquiry classrooms. They set the stage for teaching and learning. When observing inquiry-based teachers, we often see a different style of presentation, organization, questioning skills and even body language than in traditional setting.

According to Brooks and Brooks (1993), "The inquiry teachers consider the classroom environment in accordance with both the primary concept she(or he) has chosen for the class's inquiry and her (or his) growing understanding of students' emerging interests and cognitive abilities within the concept" the following are the list of behaviors that often accompany good teaching as well as inquiry based learning.

- Choosing topics to study on the basis of national standards.
- Limiting the use of lecture and direct instructions to time when the lessons cannot be taught through hands-on or inquiry-based instruction.
- Being focused yet flexible by having pre-planned lessons and questions while mediating the lessons to follow the direction of the students' questions.
- Assessing prior knowledge before starting a lesson or unit of study and using students' prior knowledge as a basis for introducing new concepts.
- Listening to students' comments and becoming aware of their false impression.
- Making learning meaningful by exploring student interest and student's prior ideas.
- Using investigations to anchor new information to previous knowledge.
- Initiating classroom discussion and dialogue by asking starter questions, prompts and posing thought provoking questions throughout the lesson.
- Asking questions that enquire critical thinking skills.
- Asking follow-up questions
- Establishing everyday routines for group interaction and for getting and returning materials.
- Encouraging students to construct their own investigations.
- Respecting student responses.
- Using time efficiency

- Integrating content with process skills and problem solving strategies.
- Acting as a facilitator, mediator, initiator and coach while modeling the behaviors of inquiry, curiosity and wonder.
- Using resources from inside and outside the school setting
- Encouraging communication skills such as speaking and listening.
- Assessing student performance in a variety of forms and monitoring students progress continuously on a day-to-day basis.
- Helping students to assess their own progress.

Conclusion

Becoming an inquiry teacher requires, creative and sustaining reflection practices and dialogue with other teachers. As Sergiovanni (1996) puts it, "Good teaching requires that teacher reflect on their practice and create knowledge in use as they analyses problems, size up situations and make decisions." Many teachers admit that the journey in becoming an enquiry teacher is a very personal experience. We make the journey in different ways, by construction our own paths to instructional renewal and reform. Your journey may begin by assessing your prior experiences in becoming a prospective teacher.

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