

# Scienter, A New Pedagogical Approach, in Enhancing Student Engagement, Critical Thinking, and Retention in A Variety of Multidisciplinary Educational Settings

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## Abstract

### Background:

This study offers "Scienter," a revolutionary instructional strategy aimed at improving student involvement and critical thinking during Large Group Teaching in Adult Learners.

### Objectives

The study's goal is to assess the influence of the Scienter approach on student engagement, comprehension, and retention through a number of classroom implementations in a variety of disciplines.

### Materials and Methods

The study involved 98 first-year students from a Mumbai-based homoeopathic medical institution. They were given pre-lecture instructions, including viewing a faculty-produced YouTube video and reading a textbook. The lecture structure involved intentional mistakes placed on PowerPoint slides, with the teacher expecting students to recognize and correct them on their own. The study aimed to test students' understanding and critical thinking skills.

### Result

Preliminary findings indicate that the Scienter method demonstrates effectiveness in promoting active learning and fostering a critical approach to academic subjects. Specifically, 68% of participants expressed that Scienter promotes active learning and encourages a critical approach, while 32% did not report experiencing these benefits."

### Conclusion:

The paper analyses Scienter's theoretical foundations, practical implementation, and implications for future educational initiatives.

**Keywords:** Physiology Learning Teaching

## Background

The Competency-Based Medical Education (CBME) framework has transformed medical education, necessitating innovative teaching methods. The Scienter method, a unique approach for medical students, aims to engage students, encourage critical thinking, and promote practical application of knowledge. This study investigates the effectiveness of the Scienter approach in medical education, focusing on enhanced information retention, critical thinking, and active learning. The project aims to provide recommendations

for educators, curriculum developers, and medical institutions to optimize medical student education in the changing medical education ecosystem.

### **Objectives**

The study evaluates student participation, comprehension improvement, information retention, discipline-specific variations, real-world implementation, beliefs and experiences, drawbacks and advantages, seeks evaluator input, and provides evidence-based recommendations.

### **Material and Methods**

**Participants:** For the study, 98 first-year students from a Mumbai-based homoeopathic medical institution were enrolled. **Pre-Intervention Preparation:** Participants received detailed pre-lecture instructions prior to the Scierter sessions. Students were instructed to view a faculty-produced YouTube video that covered the subject of the impending lecture one day prior to the planned lecture. To ensure a foundational grasp, pupils were also instructed to read the identical material from a regular textbook. **Lecture Structure:** Using PowerPoint slides, the assigned faculty member led a 30-minute session on the day of the lecture. During this talk, a unique aspect of the Scierter approach was applied: intentional mistakes were placed into each new slide in a calculated manner. The teachers expected the pupils to recognise and fix these mistakes on their own, therefore they didn't stop to address or correct them. **Implementation of Errors:** To test students' understanding and critical thinking skills, purposeful errors were incorporated into the lecture slides. It was expected that because they had watched the pre-lecture video and studied the textbook, students would be well-prepared and able to identify and fix these mistakes on the spot.

### **Results**

According to the findings, a sizable proportion of the participant group, 68%, reported favourable outcomes linked with the Scierter approach. The method, according to these participants, actively assisted their learning process and encouraged them to approach academic content with a critical mentality. In this context, active learning refers to a dynamic engagement with educational material that frequently involves participation, problem-solving, and interaction. 32% of participants, on the other hand, did not report experiencing these purported benefits. This group of participants felt that the Scierter method did not adequately foster active learning or encourage a critical approach to academic subjects. The range of replies indicates that participants had differing opinions about the efficiency of the Scierter approach. While the majority of respondents thought the strategy was effective at encouraging active learning and critical thinking, a significant minority did not.

### **Conclusion**

In summary, the article takes a multidimensional approach, analysing Scierter from its theoretical foundations to its practical implementations and drawing parallels to larger educational landscapes. This in-depth examination not only improves knowledge of Scierter in its context, but it also provides vital ideas for defining the future trajectory of educational techniques.

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