

## TEACHING METHOD IN SCIENCE EDUCATION: THE NEED FOR A PARADIGM SHIFT TO PEER INSTRUCTION (PI) IN NIGERIAN SCHOOLS

Aina, Jacob Kola & Keith Langenhoven  
School of Science and Mathematics Education  
The University of the Western Cape  
SOUTH AFRICA

### ABSTRACT

Nigerian schooling system is divided into three levels. Students' academic performance in science at both the secondary and tertiary level of this schooling system has been to many factors. One of these factors is teacher's strategy of teaching. That is why this paper is advocating for a shift in the pedagogy of teaching in science education. Based on the weaknesses of the lecture and other teaching pedagogy in science, the paper considered Peer Instruction (PI) to be a better alternative. Peer Instruction is a research-based pedagogy developed for teaching large introductory science courses. It is a method created to help make lectures more interactive and to get students intellectually engaged with what is going on. Lectures in PI consist of short presentations on key points, each followed by short conceptual questions called *ConcepTest*, typically posed in a multiple-choice format, on the subject being discussed. The choice of PI is based on several research studies that confirmed its effectiveness. The underpinning theories for this paper are social constructivism and constructive controversy because they viewed learning through interactions and argumentation. The paper suggested some recommendations.

**Keywords:** teaching pedagogy, authentic learning, rote learning, peer instruction, *ConcepTest*.