

# **EFFECTS OF PROBLEM-BASED LEARNING AND COGNITIVE STYLE ON BASIC SCIENCE ACHIEVEMENT AND SELF-EFFICACY BELIEFS OF STUDENTS WITH HEARING IMPAIRMENT**

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## **ABSTRACT**

This study investigated the effects of problem-based learning and cognitive style on Basic Science achievement and self-efficacy beliefs of students with hearing impairment. The study also examined the interaction effect of problem-based learning and cognitive style on Basic Science achievement and self-efficacy beliefs of students with hearing impairment. The study was a non-equivalent control group quasi-experimental design involving one treatment and one control group. Three research questions and three null hypotheses guided the study. Participants consisted of 65 junior secondary school class three students with hearing impairment drawn from two junior secondary schools for the hearing impaired in Rivers State, Nigeria.

Three instruments, namely Group Embedded Figures Test, Basic Science Achievement Test (BSAT), and Students' Self-Efficacy Belief Scale (SSEC) were used for the study. The results showed that problem-based learning significantly improved students' self-efficacy beliefs and their achievement in basic science. The findings of the study also showed a significant interaction effect of treatment and cognitive style on students' achievement in basic science and a non significant interaction effect of treatment and cognitive style on students' self-efficacy beliefs.

**KEY WORDS:** Problem Based Learning, Self-Efficacy Belief, Basic Science, Hearing Impairment, Cognitive Style and Achievement