

INSTRUCTIONAL COMPETENCE OF JUNIOR HIGH SCHOOL SCIENCE TEACHERS: EXPLORING THE GAPS FOR SUSTAINABLE IMPROVEMENT IN SCIENCE TEACHING AND LEARNING IN THE AKUAPEM SOUTH MUNICIPALITY OF THE EASTERN REGION-GHANA

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ABSTRACT

The instructional competence of a teacher is critical to students' positive engagement and learning outcomes. This study explored the instructional competence of the Junior High School (JHS) science teachers using quantitative research approach and cross-sectional research design. The study employed structured questionnaire to collect self-report inventory from a sample of 70 randomly selected JHS science teachers in the Akuapem South Municipality of the Eastern Region. Data gathered were analysed using descriptive statistics and t-test. The results indicated that the overall mean score for JHS science teachers' instructional competences was 3.426, SD =1.4482, which fall in the category of *high* competence. The results further revealed the following trends in science teachers competences: Teaching philosophy (mean =3.7131, SD =1.39554; $t(69) =22.692$, $p<0.05$) was rated *high*; learning philosophy (mean =3.5875, SD =1.22867; $t(69) =21.728$, $p<0.05$) was rated *high*; knowledge of learners (mean =3.5715, SD =1.51011; $t(69) =19.920$, $p<0.05$) was rated *high*; knowledge of subject content (mean =3.6154, SD =1.49551; $t(69) =20.515$, $p<0.05$) was rated *high*; and both knowledge of teaching methods and strategies (mean = 3.2664, SD =1.47791; $t(69) =18.521$, $p<0.05$) and knowledge of science curriculum (mean= 2.8.026, SD = 1.58123; $t(69) =16.007$, $p<0.05$) were rated *moderate*. Thus, knowledge of science curriculum and science teaching methods and strategies have yet to be given due attention by science teachers. These findings revealed relevant instructional *gaps* in science teaching and learning at the JHS. The study recommends that the Akuapem South Municipal Education Directorate, in collaboration with the Ghana Education Service, should organise in-service training for the JHS science teachers to update their proficiency in the science curriculum knowledge and the teaching methods and strategies to enhance effective and sustainable science teaching and learning at the JHS level.

Keywords: Science teacher, teaching philosophy, learning philosophy, curriculum knowledge, knowledge of students, subject content knowledge & teaching methods and strategies.