

Influence of Teacher Instructional Practices on Students' Engagement in Learning Physics in Coeducational Secondary Schools of Murang' A County, Kenya

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Abstract

Gender equity in enrolment and achievement in secondary school physics remains a matter of pedagogic concern. Studies carried out elsewhere in the world clearly document a myriad of reasons to account for the disparity. This study purposed to investigate how teacher instructional practices influence boys' and girls' engagement in learning of physics in Kenyan co-educational secondary schools. It was guided by feminist pedagogical theory, which is predicated on four learner centred pedagogy components: creating participatory learning environments, validating learners' ideas and experiences; encouraging social understanding and inspiring application of learned insights in the larger world; and fostering critical thinking and disposition. It applied an exploratory study design to identify nature of instructional practices; to determine underpinnings for the instructional practices; to establish teachers' experiences; and to investigate students' perceptions of frequency of gender inclusive practices in the teaching of physics. Data were collected from 14 out of 19 physics teachers and 191 out of 258 students in 14 co-educational schools in Murang'a County. The data were gathered using classroom observation schedule; survey questionnaire for students; and interview protocol for teachers. Qualitative data were analysed through the method of constant comparison. For the quantitative data, mean scale ratings of perceived frequency of gender inclusive instructional practices were computed and t-test applied to evaluate significance of difference between the boys' and girls' perceptions. Data analysis revealed that teaching of physics in the schools was mostly through expository methods. The teachers applied these methods in disregard of their high professional qualifications; with low achievement expectations for their learners, and more particularly for the girls and; in excuse of inadequate resources. The gap between teaching qualifications and practices in the classroom was further supported by teachers' feeling that they had a high teaching workload and that the syllabus was overloaded. The study further revealed that both the boys and the girls perceived that there was low frequency of gender inclusive instructional practices. Difference in the boys' and girls' perceptions were statistically significant at $\alpha = 0.05$ for majority of the questionnaire items. Findings of the study would help teachers to reflect about their pedagogical practices for the benefit of the students. Furthermore, the findings would be useful in review of gender-equity training in teacher education programs. In addition, the findings would be valuable to all stakeholders concerned with promoting gender equity and addressing issues of excellence in the teaching and learning of physics.

Keywords Teacher Instructional Practices, Students' Engagement, Learning Physics, Coeducational Secondary Schools, Murang'a County, Kenya

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