

Abstract

In-Service Teachers' Perceptions and Interpretations of Students' Errors in Mathematics

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This paper reports on findings of a research study that investigated in-service secondary school teachers' perceptions and interpretations of students' errors in mathematics. The study used a survey research design in which a questionnaire with two sections was used to collect data. The first section sought to find out the teachers' perceptions of the nature of errors. In the second part the teachers were asked to explain five common errors in algebra. A sample of forty-two mathematics teachers randomly drawn from one university in Zimbabwe constituted the respondents for the study. The findings showed that teachers perceived errors as not solely due to the student, but also as due to other factors arising from teaching and the nature of the subject. The teachers also regarded errors as useful for further inquiry in mathematics, as a normal part of learning, and as a result of previous knowledge not well understood by learners. In their explanations of given errors in algebra the teachers gave mainly procedural explanations, some of which lacked clarity or were incorrect. The study recommends the need for pre-service and in-service teacher professional development programmes to incorporate error analyses so as to develop teachers' understanding of the nature and role of errors in the teaching and learning of mathematics.