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**An investigation of physics undergraduates' attitudes towards mathematics.**

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Summary: In recent years, the failure rate on first-year mathematics modules on Physics courses at Loughborough University has given cause for concern. It was feared that failure in the first year would result in students performing poorly in future mathematics modules. Hence, a proactive support system was introduced for the mathematically less well-prepared (LWP) first-year Physics students in October 2005. On completion of the first mathematics module, this initiative showed some successful features in terms of the results of the LWP students. However, the use of qualitative research methods revealed a difference in attitudes towards mathematics between the well-prepared (WP) and LWP students. This article outlines the students' attitudes towards mathematics expressed through questionnaires and individual interviews. It compares the WP and LWP students' attitudes towards mathematics prior to university and discusses the differences between the two cohorts. The article also examines how the introduction of a support system has affected the students' attitudes. A key outcome, in terms of the LWP students, is that the first semester experience was positive in terms of increasing enjoyment of mathematics, but was negative in terms of feeling confident in mathematics. Finally, the article also analyses data taken from individual interviews with some students on students' learning approaches towards mathematics. These are investigated closely and comparisons are again made between the WP and LWP students. The analysis reveals that the LWP students failed to adapt their learning approach to one suitable for Higher Education.

*Classification:* C29

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