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THE CONTRIBUTION OF EXPLORATORY TALK TO MATHEMATICAL LEARNING

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One of the key descriptors of classroom talk, as classified by Barnes (1976) is 'exploratory talk'. Barnes uses the term to describe the type of talk which contributes directly to learning taking place. Subsequently, Mercer (1995) elaborated types of classroom talk to include 'cumulative talk', which contributes to 'exploratory talk' but does not have a direct effect on learning, and 'disputational talk' which contributes little to learning.

The use of pupil discourse in small groups as a means of mathematics learning has been described in terms of theoretical models (Ernest, 1992; Burton, 1995 and 1996) and in small group co-operative work in classrooms (Webb, 1995; Hart, 1993). However, there is little research linking the quality of mathematical thinking represented by the 'exploratory talk' and the use of small group problem solving structures in secondary mathematics classrooms.

This study is designed to determine whether the incidence of 'exploratory talk' is affected by the degree to which teacher and pupils share common beliefs about the role of small group talk as a means to mathematical learning. Pupil-pupil talk within small group activity in a secondary mathematics classroom is analysed to identify the 'exploratory talk' category described by Mercer (1995). Interview data provides evidence of pupil perceptions and teacher perceptions about the role and function of small group activity in mathematics lessons. The results illustrate the relationship between the occurrence of 'exploratory talk' in secondary mathematics classrooms and the degree to which pupils and teacher share common goals relating to small group work.

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