ABSTRACT

The purpose of the study was to find out the type of mathematics required in the two major sectors of industry in the Jamaican society (commerce and technology), and the extent to which high school students were being prepared to meet these requirements.

A representative sample of employers and employees was asked to rate certain mathematical topics according to the degree of importance and extent of use in their respective fields of engagement. They were also asked for ratings on the performance of employees on these topics. A representative sample of students trained in the different mathematics syllabuses were also tested on these topics to find out how well they would fulfil the mathematical requirements in industry.

The employers' mean ratings on requirements showed very high correlation with those of employees, thus establishing the validity of the ratings on requirements and performance. But there was low correlation between the mathematical requirements of employers in the sectors, indicating that the requirements were not the same for commerce and technology. It was further found that more mathematics was required in the sector of technology than in commerce. Of the 26 topics investigated, only 9 were required in commerce.

The mathematical competence of employees in commerce was seen to be more adequate for their work than that of employees in technology. The employees in commerce performed adequately in all the topics required for their sector, but in 7 of the topics required for technology, the employees in that sector showed inadequate performance.

Of the four groups of students studied, those trained in Syllabus D (the Associated Examining Board Mathematics) showed least inadequacy for the world of work, and those trained in Syllabus B showed greatest inadequacy. There was also a significant difference in the overall performance of students trained in Syllabus B, as against those trained in Syllabuses A,C, & D. The group mean of students in Syllabus B was far below that of the other Syllabuses.

Some recommendations were made that could help to correct the discrepancies between high school mathematics and the mathematics that is required for the world of work.