Lecturers in national polytechnics have a major role in promoting technical education in Kenya. They need to be equipped with relevant skills and knowledge in order to perform their roles. It is in this light that this study sought to:

i) Determine factors affecting training needs of polytechnic lecturers.

ii) Identify the teaching competencies that polytechnic lecturers use and practise in teaching.

iii) Identify the competencies that the polytechnic lecturers need in order to teach effectively.

iv) Determine the discrepancy between what teaching competencies they need and practice.

The study sample included lecturers and heads of departments at Mombasa and Kenya Polytechnics. Data was collected by use of questionnaires. The needs assessment process was used to guide data analysis in which descriptive and inferential statistics techniques were employed.

It was expected that the study was to be instrumental in identifying the national polytechnic lecturers' needs for effective teaching which was to provide a base upon which their training programmes could be recommended or developed.

It was revealed that 16.7% of the lecturers needed immediate upgrading since they were teaching at their level of qualifications. Other immediate training needs of lecturers included, professional teacher education, guidance and counselling, research techniques and Masters degree programmes. Future training needs included training at Ph.D. and Masters levels. Their experience, academic qualifications and attitudes towards training affected the training needs of polytechnic lecturers. They were further found to be affected by the nature and level of course / programmes taught, legislation, industries' needs and curriculum, funding and donor influence.