

UNDERSTANDING CHEMICALS RISKS TO HUMAN HEALTH AND THE ENVIRONMENT: FINDINGS FROM EVALUATIONS BASED ON THREE COUNTRIES

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Introduction: The Toxicology in the Classroom courseware and materials have undergone several rigorous evaluations by content and instructional experts. The final evaluation was the test-runs conducted in several schools in Malaysia, Argentina and Ghana. Feedback from the test-runs on actual classroom practices is an important component in the evaluation process.

Objectives: (a) To refine the Toxicology in the Classroom courseware based on the results from the test-runs, its applicability and acceptance in countries of different levels of infrastructure, content relevance to school's curriculum.

(b) To inform and introduce new media educational packages for Toxicology in the Classroom.

Methods: A total of 17 schools (7 in Malaysia, 4 in Argentina and 6 in Ghana) were involved in the test-runs. Schools in all three countries comprised both primary and secondary schools from urban and rural settings. Target group was 9 to 13-year-old children. Training was provided for teachers prior to the test-runs and evaluation questionnaire was prepared for teachers' assessment for the testing. Similar questionnaires were used in the three countries for comparability. Test-runs in classroom were video-taped and photographed as concrete references. Videos were transcribed and analysed. Interviews with teachers and children were taped recorded, transcribed and analysed.

Results: Results from test-runs were used to enhance the courseware and develop supplementary educational materials. Levels of infrastructure of the schools differed not only between the test-run countries but between schools in the same country. While there were schools with computer facilities and children were computer-literate to use the CD version without difficulty, there were also schools, particularly in the rural areas where such facilities were limited. Despite this, teachers were able to use the courseware very effectively, produced flipcharts and teaching materials. Regardless of the level of sophistication of schools, the materials were found to be useful; specifically, topics corresponding to biology, chemistry, health and environmental topics. Teachers used story-tellings, games, and experiments which were prepared as auxiliary subjects for the course in all 3 countries. These greatly attracted the children's attention and interest. In Malaysia some teachers invented games using the information in the courseware.

Conclusion: The test-runs were very well received both by the schoolchildren and their teachers and the creativity shown was impressive. New media educational packages have been refined and developed. These include CD-Rom, books for Teachers and Children Self-Learning, Teachers Guide on Teaching Activities, Children's Workbook, Story Telling animated videos and Flip Charts for use in countries of different levels of development.