

## **Report on organizing the Rose survey in Trinidad and Tobago**

June George, [jgeorge@fhe.uwi.tt](mailto:jgeorge@fhe.uwi.tt), University of the West Indies, St. Augustine campus, Trinidad and Tobago, West Indies.

### **1. Rose team**

The team consisted of the following persons:

Dr. June George (Project leader)  
Dr. Susan Herbert  
Mrs. Joycelyn Rampersad  
Dr. Rawatee Maharaj-Sharma  
Mrs. Margaret Cain (Research assistant)

The research assistant is a Ph.D. student and all other members of the team are science educators at the School of Education, The University of the West Indies (UWI), Trinidad.

### **2. School system and science teaching**

The education system in Trinidad and Tobago has evolved from the British system since Trinidad and Tobago was a former British colony. The country gained independence from Britain in 1962 and, over the years, efforts have been made to fashion the education system to meet local needs. The system now consists broadly of a pre-school sector, a primary sector (7 years), a secondary sector (5-7 years) and a post-secondary/tertiary sector. The primary and secondary sectors consist of government schools, church schools with government assistance, and private schools. The country has a system of universal primary education (7 years) and universal secondary education for a period of 5 years.

Science is on the curriculum of the primary schools and it is also a compulsory subject in the first three years of secondary schools. Recent curriculum innovation efforts by the Ministry of Education have resulted in the production of a new lower secondary science curriculum with a constructivist approach. This curriculum is being used in most government secondary schools and covers work in the first three years. In the fourth year of secondary school, students choose whether or not they wish to continue studying science subjects. If they do continue, they pursue chemistry and/or physics and/or biology and/or integrated science for a further two years, and then write terminal examinations. They may leave school at this point and either pursue post-secondary training (usually at non-university institutions) or else enter the job market. The more academically inclined students continue on in secondary school for a further two years to pursue pre-university courses. The separate science disciplines may be pursued at this level.

### **3. Translation**

English is the official language in Trinidad and Tobago and thus, no translation of the final version of the Rose questionnaire was necessary. The Trinidad and Tobago Rose team had made inputs into the earlier versions of the questionnaire.

### **4. National questions**

No new questions were added to the questionnaire.

## **5. Piloting**

No piloting of the questionnaire was done.

## **6. Official permission**

The Rose project fitted in well with a research project on lower secondary science teaching and learning that we were conducting at the time. Permission for the lower secondary science project had been sought and obtained from the Director of School Supervision of the Ministry of Education. The Rose project was used as the final phase of this overall project.

## **7. Population**

The target population was the cohort of 14-16 year old students in the third year of secondary school. At the end of the third year, students decide whether or not they will continue to study science so we thought that it would be useful to capture the perceptions of a sample of them at this point.

## **8. Sample, participation, and data collection**

There were 115 schools with a lower secondary sector at the time of the research. We did stratified random sampling of two broad school types in choosing the sample of schools. The two school types were the traditional secondary schools and the new sector secondary schools. The latter are the schools that were built in the post-independence era as the education system was expanded.

We chose 24 secondary schools in the sampling process and we set out to collect data from one third-year class in each of these schools. Contact was made with the principal or vice principal in each of these schools by a member of the research team and the purpose of the project was explained and the logistics of the data-collecting process discussed. In addition, a letter was written to each principal outlining pertinent information about the project and these letters were included in the envelope with the questionnaires for the school.

The questionnaires were administered by a research assistant or a school science teacher to whom the project had been thoroughly explained beforehand. We obtained data from all 24 schools, but we had to throw out data from one school because these questionnaires were not properly done and there were many blank pages in them.

## **9. Coding**

The Rose research team engaged in “cleaning” the response data. This involved examining questionnaires closely to identify any that had not been completed properly. The team looked specifically for questionnaires with several blank pages and those where there was a predictable pattern of response. About 10 such questionnaires were identified and these were removed from the pool. We ended up with satisfactory responses from 699 students.

The research team also entered identification numbers on the questionnaires, as well as two country specific codes to indicate (i) whether the school was a single-sex school or a co-ed school, and (ii) whether the school was a traditional school or a new sector school.

The coding of the “closed” questions was done by a team comprising the research assistant and three high school graduates. The coded data were entered into an Excel file by a data-entry clerk. All of the coding of the open-ended questions was done at a later date by the research assistant who also entered the data into a separate Excel file. Both Excel files were e-mailed to the project organizers.