

Report on organizing the ROSE survey in Russia

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1. ROSE team

- name of contact person
- name of coworkers
- occupation
- name of institution

The Russian ROSE team consists of Dean Sergey Bogdanov, senior lecturer Irina Tevel, Head of Physics Department Galina Yanyushkina. We are all located at Karelian State Pedagogical University, Faculty of Physics and Mathematics.

Five undergraduate students and 28 schoolteachers were also involved in data collection, coding and preliminary analysis of the results.

2. School system and science teaching

- (short!)
- number of years with compulsory school
- schools with grouping of pupils according to ability, gender, language, region, religion, special needs, etc.
- how science teaching is arranged at various grades (e.g. one common science subject or different subjects like physics, chemistry, biology, etc.)

The Russian school system has nine years of compulsory education. Children start at school at the age of 6-7, and are about 15 when they leave. Compulsory school is divided into two steps: primary school with grades 1 to 4 and lower secondary (basic) school with grades 5 to 9. High secondary school consists of 10 and 11 classes. The school is free.

Some large schools arrange educating as profiled (i.e. mathematics or foreign languages are studied more deeply) saving the basic level but it is not the common practice. Besides there are schools where children with special needs (deaf or blind, etc.) can study. There are also a few so called "specialized" schools for talented kids (in arts, first of all) and few "authorized" schools using alternative educational approaches.

Science is studied in different ways in the primary, basic and high school. There is the common subject "Nature and Science" in the primary school and in the fifth grade as well. It includes some items from biology, physics, astronomy, chemistry and physical geography. The "Science" subject field in the basic school has more complicated structure shown in the following table:

Table 1

Subject	Grades	Notes
Nature and Science	5	may be 5 to 6
Biology	6 to 9	may be 5 to 9
Geography	5 to 9	
Physics and Chemistry		as a propedeutic selective course in 5 and 6
Physics	7 to 9	may include astronomy
Chemistry	8 to 9	

The high secondary school science courses differ deeply depending on pupils' choice. As a rule geography (10), biology, physics and chemistry (10 - 11) are offered to study separately though all of them may be changed with Science as the only subject.

3. Translation

- description of the process
- at what time the translation was done
- any particular difficulties?

Sergey and Irina were both involved in the translation of the ROSE questionnaire into Russian. The first Russian draft translation was developed in January 2003. Some items (mainly from D and F blocks) were proofread by our colleagues from Foreign Languages Faculty of the University to make wording simple and clear. Besides the draft version was discussed during the meetings with the teachers involved (January-February 2003). We also contacted with the colleagues from the Baltic countries in order to correlate some translation items.

4. National questions

- additional questions for background of the home (parents education or occupation, etc.)
- additional survey questions

We added one additional question to the title (specifying the pupil's family).

Besides we added 5 national questions at the end of the questionnaire, trying to derive the social status of the pupil and his/her family, pupils' everyday life and social activity and so on.

We also added «splitted» versions of some questions from block F ("My science classes"). The reason was that we have not "science" lessons here in Russia in basic school, but physics, chemistry, biology, geography as the separate subjects. Sometimes pupils' attitudes towards mentioned subjects are very different.

5. Piloting

- pilot testing of the questionnaire, if any
- experiences, feedback and results

In January 2003 we hold the meetings with the teachers involved in the project.

Besides some technical aspects we discussed also our national part of Questionnaire.

Then the teachers started with piloting of data collection with ninth and tenth forms (via private communication with some pupils from the schools involved). The results turned out to be essentially different for these two forms.

It seems natural with respect to the fact, that ninth form here is the last of compulsory schooling, and the proportion of pupils, which made their educational choices, is much more higher in the tenth form. In some sense tenth-form pupils are more self-motivated and "adult".

Besides the proportion of 15-year old pupils is high in the tenth classes.

Of course it seemed interesting to deal with the both populations and to check some our suggestions, but we already split the population with respect to city - rural parameter. So it was evident that we'll face the lack of statistical significance of the data with additional splitting (9-10 forms. Finally we restricted population to ninth form students.

6. Official permission

- permission needed from authorities
- restrictions and difficulties, if any

No official permission or registration was required.

7. Population

- demarcation of the target population (the population to be represented)
- accessible population

The ROSE target population in Russia was the cohort of (mainly) 15 year old pupils at the grade level 9 living in Republic of Karelia (North-West part of Russia). Some technical (postage and communicational) problems out of our dependence made us to limit our investigation within the Southern Karelia. The group of pupils involved may be considered as representative respecting that more than ½ of the population lives there. At the same time small rural schools are weakly shown but otherwise the condition of not less than 25 ninth-grade pupils participant from the same school couldn't be satisfied.

8. Sample and participation

- how the sample was drawn, random sampling?
- response rate, percentage of positive responses
- how good does the sample represent the target population?
- possible weaknesses connected to the sample

30 schools were involved: 21 from the capital of Karelia, Petrozavodsk and 9 (including rural ones) from Ladoga educational district.. 721 pupils filled up the questionnaire. We invited to participate in the project mainly the teachers and the schools, with whom the fruitful professional contacts were established before. So we did not choose the schools randomly, but tried to include all types of the schools, namely – lyceums (4), gymnasiums (2), others in Petrozavodsk (15), rural (3), others (6). Only 1 school was compulsory (with grades 1-9), the others were high secondary (grades 1-11).

We asked the teachers to choose the class within the school themselves. The number of pupils within the class varied from 7 to 32 with typical value 20-25.

Some weakness in our sample may exist due to lack of rural schools, and surplus of city schools.

9. Data collection in schools

- how the contact with schools was established
- how the questionnaire was duplicated
- how the questionnaire was distributed
- persons involved in conducting the survey at schools
- what instructions the persons got
- practical problems, if any
- at what time the data was collected

We organized some workshops (in Petrozavodsk and Sortavala) with the teachers and undergraduate students involved in the project during early spring 2003 and delivered the questionnaires to them directly. We also attached a letter with some instructions and descriptions of practicalities for conducting the survey. Undergraduate students surveyed the process in the most of Petrozavodsk schools and interviewed some pupils after.

Most schools had conducted data collection during the Spring 2003.

10. Feedback and experiences

- reactions from the pupils, if any
- reactions from the persons who collected the data

- ROSE team's general feeling of how well the survey was conducted

Most of the teachers involved were interested in the issue, and we have fruitful discussions together during several workshops. We intend to continue the mutual work on analysis the results in the future.

We also have the feeling that the pupils involved were interested too and curious about the results.

11. Coding (also of the open-ended I question)

- how the coding was done
- who coded the questionnaire
- problems with the coding, if any
- how flippant or incomplete responses were handled
- proofreading and checking of the coding, if any
- at what time the coded file was finalized

We (Irina, Galina and Sergey) coded the data during the Spring and Summer 2003. 5 undergraduate students helped us.

Flippant or incomplete responses were coded as 9 and there was one person whose fully flippantly filled paper was ignored.

In July 2003 the Russian Excel file was finalized - with 721 respondents. Later it was transformed into SPSS file and this final version was ready in November 2004.

- 351 girls
369 boys
1 respondent with missing response for sex
- 302 14-year-olds (41.9 %)
341 15-year olds (47.3 %)
64 16-year olds (8.9 %)
12 others (1.7%)
2 respondents with missing response to age (0.3 %)

We have completed coding item I data in February 2004.

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