

Report on organizing the ROSE survey in Norway

Camilla Schreiner, University of Oslo, February 2004

1. ROSE team

The Norwegian ROSE team constitutes Professor Svein Sjøberg, master student Kristjan Ketill Stefansson and Ph.D. student Camilla Schreiner. We are all located at University of Oslo, Department of Teacher Education and School Development.

2. School system and science teaching

The Norwegian school system has ten years of compulsory education. Children start at school at the age of 6, and are 15 when they leave. Compulsory school is divided into two steps: primary school with grade 1 to 7 and upper secondary school with grade 8 to 10. Through all grades in the 10-year compulsory school there is one common subject for the natural sciences called "Science and the environment".

Norway is sparsely populated and many of the primary and lower secondary schools are very small. For example, we have that one quarter of all lower secondary schools in Norway has twelve or less pupils at grade 10.

In Norway there is no streaming or grouping of pupils according to ability or gender, etc., but we have a few private schools basing their teaching on particular religions, philosophies or alternative educational approach. 96-98 percent (varies with grade) of all children in Norway attend the state schools.

There are a few special schools for deaf children and children with very weak abilities, but most pupils with special learning needs are integrated in ordinary public school. The only significant minority group in Norway is the several thousand indigenous Saami inhabiting the northern part of the country. They go to Saami schools with Saami curricula.

3. Translation

Although the ROSE questionnaire was developed in Norway, the master version was in English. Svein and I were both involved in the translation into Norwegian.

In October 2002 the English version of the questionnaire was regarded as finalized, and I developed the first Norwegian draft. This was proofread and commented by Svein, and after a couple of meetings we agreed on the final Norwegian version.

In the Norwegian as well as in the English edition, we have been aiming at keeping the expressions and the wording simple and clear. During the Norwegian translation of the questionnaire, we met a few items in the English version in which the wording could be further simplified. In this way the process of developing the Norwegian version of the questionnaire functioned as a last check through the English version as well.

4. National questions

We did not add any items for background variables, but in the end of the questionnaire, we added two national questions:

K. What profession would you like to have when you are grown up?
(open ended)

L. Below is a list of possible goals people may find important. In what degree do you find these goals important for our society?
(response in a Likert scale with ten categories from "not important" to "very important")

1. Achieve high economic growth
2. Protect untouched Norwegian nature
3. More emphasis on medical research (e.g. on cancer and HIV/AIDS)
4. Protect the environment against pollution
5. Give the elderly safe and decent conditions
6. Preserve law and order
7. Enhanced emphasis on research on new technology
8. Bring in prohibition of smoking
9. Provide protection of our big predators
10. Prepare Norway for welcoming more refugees and immigrants
11. Eradicate all forms of poverty and distress in Norway
12. Lower taxes and duties
13. Use gender quotas to have more women in senior appointments
14. Enhanced emphasis on education and better schools
15. Give economic support to poor countries
16. Provide a society free from drugs

5. Piloting

When we had available a Norwegian translation of the final version, it was tested by interviewing two pupils after they had filled in the questionnaire. In the beginning of November 2002 we brought the questionnaire development to a close both for the English and for the Norwegian version.

6. Official permission

In October 2002 we wrote an e-mail to The Norwegian Social Science Data Services with descriptions of the ROSE project and the questionnaire. We requested an account of what formalities and official procedures that had to be followed in connection with surveys of this kind. The response was that since the only background variables were sex, age and name of the school, no official permission or registration was required.

7. Population

The ROSE target population in Norway was the cohort of 15 year old Norwegian pupils living in our country in 2002. As ROSE samples school classes and not individual pupils, the target population was more precisely defined as the pupils at the grade level where most 15-year old pupils were likely to go. This means the grade level with most pupils born in 1987, which corresponds to grade 10 in lower secondary school. 96 percent of the pupils born in 1987 were attending grade 10 in 2002.

8. Sample and participation

The Norwegian Ministry of Education and Research has the review of all schools and school statistics in our country. We got the database from which we drew the sample from the Norwegian TIMSS/PISA group. As they were about to draw the sample for PISA 2003, they had recently received the database from The Norwegian Ministry of Education and Research.

The database contained totally 1.125 schools and 55.163 pupils at grade 10. Saami and special schools were not in the database. The smallest schools had only one pupil at grade 10, while the largest school had 182.

We developed a small routine in Excel which drew 70 schools randomly. All the pupils in the database were assigned a unique number, and the Excel program picked randomly one pupil from the database. Once the pupil was drawn, the school to which this pupil belonged was transferred to the sample. Such sampling routine implicates that the probability of one school to be drawn was identical to the number of pupils attending grade 10 at the school, and that the chance to be sampled was higher for pupils going to large schools.

In the end of October 2002, we sent letters to the 70 sampled schools and invited them to participate in the ROSE survey. We received 58 affirmative and 12 negative answers. This gave us participation on school level of 83 percent, which we regard as an overall positive attitude towards participating in the survey. As we do not know the exact number of pupils in each school class, we cannot report the participation percentage on the level of the pupils.

As large cohorts are often divided into smaller groups of pupils in parallel classes, and as we wished to sample no more than one class from each school, we requested the schools to indicate how many parallel classes their school had at grade 10. Again we made use of an Excel routine for drawing one class randomly from the total number of parallel classes. One school reported that for practical purposes they conducted the survey in an other parallel class than the one suggested in our instructions. But besides this single feedback, we do not know whether the schools carried out the survey in the class we proposed.

Except from the Saami minority, the Norwegian population is ethnically homogeneous. In 2002 the immigrants constituted 7.3 percent of the Norwegian population. European immigrants make up 45 percent of the total immigrant population, Asian immigrants for 38 percent and Africans 10 percent. Some 90 per cent live in urban settlements, so in most areas of the country immigrants represent only an insignificant part of the sample.

There may be some weakness in our sample due to issues described above, like missing respondents and immigrants, but our overall impression is that the quality of the sample is high. We believe that we can regard the sample being representative for the Norwegian target population.

9. Carrying out in schools

At each school, the headship came up with one person that could organize the project locally. Through these coordinators we could distribute one class set of printed questionnaires to each class. Successively as we received affirmative answers to our invitation, the class sets of questionnaires were sent to the coordinators at the schools.

In the sending with the bunch of questionnaires we attached a letter with various instructions and descriptions of practicalities for conducting the survey, like: which of the parallel classes that should participate, the survey should preferably be conducted before Christmas, ca. 40 minutes would be sufficient for most pupils, pupils needing more time could complete the questionnaire in their homework, the school could preferably carry out the survey in a science lesson, the questionnaires should be kept unnamed and anonymous, etc.

We also attached a letter addressed to the parents with a piece of general information about the ROSE project, and for letting them know that the survey was based on volunteer participation. If desirable, the coordinators could duplicate and distribute this

letter to the parents. The sending also contained a stamped and addressed envelope for returning the questionnaires to the University of Oslo.

During November and December 2002 all schools but five had conducted the survey and returned the filled-in questionnaires, and within the end of January 2003 we had received the five remaining envelopes.

10. Feedback and experiences

To each participating school we sent a written acknowledgement for recognition of their work and their help. In this letter/e-mail we also took the opportunity to ask about their experiences with carrying out the survey in the classes, what kind of practical obstacles they met, the spontaneous reactions from the pupils, etc.

We received totally eight responses to this request, and all were predominantly positive...

- "the questions seemed clear and good"
- "a straightforward survey, but with numerous items"
- "no questions had to be clarified on the way"
- "appropriate time"
- "the pupils found the questions interesting"
- "they worked concentrated through the questionnaire"
- "they were proud to join it - especially as this was something youth from the whole world took part in"
- "they needed 20 to 40 minutes for answering"
- "I received no questions on the way"
- "it was obviously easy to understand"
- "some of the pupils with weak reading ability found that it was much to read, but they brought the questionnaire home and delivered it the day after"
- "I noticed that some of the answers were rather flippant, but not all of the pupils are that mature"
- "most of the pupils felt rather important, which was good"
- "my impression is that they found the form exciting. One can see such things from the intensity they put in their work with the filling-in"
- "I think they regarded this as one of the more interesting surveys"
- "my impression ... is that this is an interesting angle for developing the subject. In my opinion much more sensible than many other comparative studies"
- "KEEP ON! WE ARE WITH YOU - 10B ARE WISE YOUNG PEOPLE WITH A BRIGHT VIEW OF THE FUTURE"

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

All the Norwegian responses were coded by Svein's children Liv (18) and Are (16). They coded directly into SPSS according to the guidelines in the "ROSE Handbook", and in general they found the job uncomplicated and straightforward.

In some questionnaires the respondents had obviously not taken the task seriously, e.g. by making symmetric patterns in the response categories. Such questionnaires were excluded. In instances where Liv and Are were unsure about how to handle the responses, they made notes in the SPSS file.

Towards the end of February 2003 the coding was completed, and I reviewed and considered the notes from Liv and Are. There were for example instances where the respondent took the task seriously through the first few pages, but seemed to have flipped out during the last part of the questionnaire. There were other instances where entire pages were empty, like if the respondent had overlooked them. In cases where only minor parts of the questionnaire were not satisfactorily filled in, the variables were

coded with 9 (missing). Otherwise the whole questionnaire was excluded from the SPSS file.

I also proofread the coded file by searching for misprints like empty cells, cells coded with two digits, and cells coded with letters different from the allowed letters for the question. Such coding errors were corrected by looking up the question in the corresponding questionnaire.

We consider it as likely that there still are some flippant responses and coding errors in the data file, but our overall impression is that the quality of the data file is rather high.

In the end of February 2003 the Norwegian SPSS file was finalized - with 1204 respondents evenly distributed on

- 601 girls
602 boys
1 respondent with missing response for sex
- 37 14-year-olds (3.1 %)
1144 15-year olds (95 %)
23 16-year-olds (1.9 %)