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REVIEW OF ASSESSMENT ACTIVITIES



Issue 5

Fall 1996

In This Issue

As described in the previous issue, this issue incorporates several changes to the newsletter. We are pleased to introduce the new *Country Highlights* section, with Spain serving as the first “highlighted” country. Additionally, we appreciate the time you took to let us know what topics you would like to see; we begin exploring your suggested topics in this issue and will continue to do so in future issues. Finally, in an effort to keep you up-to-date, we have updates from Networks A and B. Please continue to let us know what you think!

Assessment Items

We asked you to describe the types of items you use when assessing students. You replied that your assessments contain at least two or more types of items. Although many of you rely on traditional multiple-choice items, your answers also reflect the trend toward constructed response and authentic assessment type items. You use a variety of constructed

response items – including essays, short-answer items, and long-answer items – as well as authentic assessment tasks – including oral assessments, demonstrations and hands-on tasks, portfolio assessment, and group tasks. Below we provide details about the types of assessment items you use, and Table 1 summarizes your responses.

Belgium (French), Canada, Finland, France, Portugal, Spain, Sweden, and the United States replied that they use multiple-choice items. **Finland** uses multiple-choice items to assess mother tongue, mathematics, and English. **Sweden** uses some multiple-choice items on its foreign language test. **France** uses a few multiple-choice items as well as other types of close-ended items. **England** also employs other types of close-ended items.

Various types of constructed response items (e.g., open-ended items and essay items) are used by **Belgium (French), Canada, Denmark, England, Finland, France, Portugal, Spain, Sweden, and the United States**. Specifically, **England** uses open-ended responses that are linked to its National Curriculum; these items are used on tests in English and mathematics for 7-year-olds as well as on tests in English, mathematics, and science for its 11- and 14-year-olds. Open-ended response items are employed by **Finland** in order to assess mother tongue and mathematics; additionally, **Finland’s** English

**TABLE 1
Types of Assessment Items**

Country	Types of Assessment Items Used
Belgium (French)	<ul style="list-style-type: none"> • Multiple choice • Open-ended
Canada	<ul style="list-style-type: none"> • Multiple choice • Constructed response • Practical tasks, where students provide full responses including charts, diagrams, and formulae
Denmark	<ul style="list-style-type: none"> • Open-ended • Authentic assessment
England	<ul style="list-style-type: none"> • Open- and close-ended responses that are linked to the National Curriculum • Teacher assessment based on class work in English, mathematics, and science
Finland	<ul style="list-style-type: none"> • Multiple choice • Open-ended (including short written reply items and one essay item for English, and structured and open-ended items for mathematics) • Portfolio assessment for writing in mother tongue (in Finnish schools only)
France	<ul style="list-style-type: none"> • Multiple-choice and some close-ended items (e.g., fill-in-the-blank items) • Short-answer constructed response; also extended-answer constructed response for the year 9 (3ème) assessment
New Zealand	<ul style="list-style-type: none"> • Authentic assessment tasks used include oral assessment, active demonstration, group tasks with a teacher/administrator as facilitator, pencil-and-paper tasks, and practical/hands-on tasks.
Portugal	<ul style="list-style-type: none"> • Multiple choice • Open-ended (short and long answers) and essays • Task assessment
Spain	<ul style="list-style-type: none"> • Multiple choice • Open-ended questions (such as for writing) • Real tasks (for physical education)
Sweden	<ul style="list-style-type: none"> • Multiple choice (for foreign language) • Open-ended, including essays (for mother tongue and foreign language), listening comprehension (for foreign language), fill-in-the-blank (for foreign language), and solving problems (for mathematics) • Speeches (for mother tongue and foreign language)
Turkey	<ul style="list-style-type: none"> • Written and oral examinations are used in conjunction with performance on class projects, homework, and out-of-class activities (e.g., service activities and participation in sports)
United States	<ul style="list-style-type: none"> • Multiple choice • Short-answer and extended-answer constructed response • Authentic assessment, including hands-on science tasks

assessment uses short-answer items and one essay item. In **France**, short-answer constructed response items are employed in its year 3 (CE2), year 6 (6ème), and year 9 (3ème) assessments; additionally, extended answer constructed response items are used on the year 9 (3ème) assessment, and both structured and open-ended items are used on the mathematics assessment. **Portugal** relies upon short- and long-answer open-ended items for assessing writing and mathematics assessment. **Portugal** relies upon items as well as essays. **Spain** reported using open-ended items for assessing writing and composition. In **Sweden**, essay items are used to assess mother tongue and foreign language also; for foreign language, students complete fill-in-the-blank items. Furthermore, on its mathematics test, **Sweden's** students are required to solve mathematics problems. **The United States** employs short-answer constructed response items that are scored as right or wrong, as well as extended answer constructed response that are scored in terms of quality of the response.

Canada, Denmark, Finland, New Zealand, Portugal, Spain, Sweden, and the United States reported using some type of authentic assessment item. Their responses revealed an interesting range of “real” tasks. **Canada** uses practical tasks that measure scientific inquiry skills; on these tasks, students are asked to provide full responses including charts, diagrams, and formulae. To assess mother tongue in **Finland** (Finnish schools only), portfolio assessment is used as a measure of writing skills. **New Zealand** uses several types of authentic assessment, including oral assessment, active demonstration, group tasks, where a teacher or administrator facilitates the task, pencil-and-paper tasks, and practical, hands-on tasks. **Spain** relies on real tasks to assess students in physical education. In

Sweden, students are asked to give speeches in order to assess their oral capabilities in mother tongue and foreign language; and on its mathematics test, groups of students are asked to solve problems. Furthermore, **England** assesses students based upon teachers' evaluations of class work in English, mathematics, and science. **Turkey** evaluates students according to class work, homework, and out-of-class activities; (e.g., service activities and sports) as well as at least two written examinations and one oral examination. Finally, **the United States** notes that it uses hands-on science tasks in its assessment.

Background Information

Our question regarding the types of background information collected on students, teachers, schools, parents, and the community elicited very detailed responses! While we are not able to discuss below each variable collected by each country, we have provided countries' full responses in Table 2, which we summarize below.

Information regarding schooling and teaching is collected from students by **Belgium (French), Canada, England, Finland, France, Portugal, Spain, and the United States**. Examples of information collected range from grade repetition (for **Belgium (French) and France**) and grade level achieved (as in **Canada**) to instructional methodology (in **Canada and Finland**). An interesting item collected by **Canada** is the number of years that the student has attended school in Canada.

**TABLE 2
Background Information**

Country	Type of Background Information Collected:
Belgium (French)	<ul style="list-style-type: none"> • On students: gender, age, grade repetition, mother tongue, and socioeconomic status variables. • On teachers: opportunity to learn.
Canada	<ul style="list-style-type: none"> • On students: gender, age, grade level achieved, years attended school in Canada, languages of instruction, resources available in the classroom, instructional methodology, and attitudes (e.g., How do you feel about science? Are you considering a career in science?).
England	<ul style="list-style-type: none"> • On students: gender and school type
Finland	<ul style="list-style-type: none"> • On students: age, gender, homework in various subjects, educational aspiration, parents' education and occupation, home possessions, TV and video viewing, special education, parents' interest in schoolwork, calculator and computer use, instructional activities, achievements in subjects, reading strategies, attitudes towards subjects, self-esteem, importance ratings of school subjects (on 17 subjects), and quality of school life. • On teachers: gender, experience as teacher, in-service training, lessons per week, class-size, heterogeneity of class, special education, sources in planning of teaching, textbooks, lesson preparation, teaching goals, instructional activities, homework, guidance of learning strategies, library work, school-based curriculum, choice of subjects, cutbacks in instruction, views on student motivation, and attitudes on changes of own work, students' abilities, school-based development, and staff meetings. • On schools: location (e.g., urban-rural), student enrollment, number of teachers, number of remedial teachers, principal's task profile, school library resources, school-based curriculum development, school development projects, staff development, cutbacks in resources, substitute teaching, changes in class size, remedial teaching, special education, pupil welfare, and attitudes on effectiveness and accountability, student motivation, cooperation, home and school, and developmental challenges.
France	<ul style="list-style-type: none"> • On students: age, gender, national origin, family social status, school history (e.g., repeated grades), and attitudes toward school and other general attitudes and experiences (n the 3ème assessment only). • On schools: public versus private, rural versus urban, and size.
New Zealand	<ul style="list-style-type: none"> • On students: age, gender, and ethnicity. • On schools: location (i.e., North or South Island, urban/small town/rural)
Portugal	<ul style="list-style-type: none"> • On students: personal background variables, learning and cultural activities inside and outside school, social, economic and cultural background, and bullying. • On teachers: personal and professional background variables, teachers' representation of their work, students, and school, teaching style, resources used, and knowledge of social context. • On schools: school organization, regional features, school resources, social, cultural and economic context, parents/schools relationships, and violence/aggression problems.
Spain	<ul style="list-style-type: none"> • On students: age, gender, mother tongue, academic data, academic self-concept, attitudes, habits, relationship with classmates, teachers and school, family educational climate, family characteristics, family economic status, and family cultural status. • On teachers: professional descriptive data, training, class characteristics, resources, support to special activities or students, teaching procedures, relationships with colleagues, families, students and directive team, attitudes, views and expectations, work methods and habits of the students, and views on evaluation. • On schools: resources, staff training, educational projects, educational practice, school climate, attitudes and expectations, and other school characteristics. • On families: family characteristics, economic status, cultural status, educational climate, relationships with teachers and school, attitudes and expectations, and contextual characteristics.
Sweden	<ul style="list-style-type: none"> • On students: socio-economic variables (collected through national statistics) • On schools: number of students, teachers, and school leaders; costs for education, and the marks in the leaving certificate (collected through a separate data collection procedure, not part of the assessment)
Turkey	<ul style="list-style-type: none"> • On students: psychological and social development and their families' economic and social variables.
United States	<ul style="list-style-type: none"> • On students: gender, ethnicity, mother's and father's education, reading materials present in the home, which parents live at home, instructional activities, courses taken, use of calculators in class, perceived utility of mathematics, motivation to do well, familiarity with assessment items, and perceived difficulty of the test. • On teachers: teacher demographics, class environment, and opportunity to learn. • On schools: school demographics, the school environment and resources.

Family and home background variables are collected from students in **Belgium (French), Finland, France, Portugal, Spain, Turkey, and the United States**. Examples of these variables include socio-economic status, which is obtained in **Belgium (French) and Sweden** (where it is collected through national statistics and is not obtained as part of the test) and family characteristics, which are collected in **Finland, Portugal, Spain, and the United States**. On an interesting note, **Finland** asks students about their home possessions as a way of measuring students' home life and economic status, while **the United States** asks students to report on the reading materials available in their homes.

Information is obtained on students' personal background and attitudes in **Belgium (French), Canada, Finland, France, New Zealand, Portugal, Spain, Turkey, and the United States**. Examples of these variables include age (**Belgium (French), Canada, Finland, France, New Zealand, and Spain**), gender (**Belgium (French), Canada, England, Finland, France, New Zealand, Spain, and the United States**), mother tongue (**Belgium (French) and Spain**), and attitudes toward school subjects (**Canada and Finland**). **Finland** asks students to report on their TV and video viewing habits, while **Portugal** asks about bullying and relationships with classmates and teachers. Additionally, **France, New Zealand, and the United States** collect ethnicity or national origin data.

Regarding teachers, four countries described the information they collect. **Finland, Portugal, Spain, and the United States** collect a broad range of teacher data, such as teaching experience and training, class background, instructional techniques, opportunity to learn, and attitudes about students and about their work as teachers.

Belgium (French) collects data on opportunity to learn.

Concerning background information on schools, **Finland, France, and New Zealand** gather data on the school's location. Also, **Finland and Spain** collect detailed data on staff, curriculum, resources, student composition, and teacher attitudes. Similarly, information on school organization, resources, context, relationship between parents and the school, and violence problems is obtained by **Portugal**. Additionally, **France** collects information on school size and type of school (i.e., public or private). And, in **Sweden**, the information gathered includes the number of students and teachers, the cost of education, and the marks for leaving certificates; this data is not obtained as part of a test but rather is collected through a separate mechanism. **The United States** collects data on school demographics, the school environment, and resources.

Spain was the only country to report that they collected information directly from families. Specifically, data is obtained on family characteristics, economic and cultural status, educational climate, relationships with teachers and school, attitudes and expectations, and contextual characteristics.

Metrics

We asked you to tell us about the types of metrics used to analyze assessments. Many of you (**Belgium (French), Finland, France, and Portugal**) used the average percent correct. Distributions, means, standard deviations, and confidence intervals also are used in **Finland**; and **Spain** uses raw scores, percentages, means, standard deviations, while **England** uses the percentage of boys and girls

at each school who fall at each level of the National Curriculum (on a 1 to 8 scale).

With respect to scaling procedures, **Denmark** produces scales and computes the average score for the whole country. **Finland, Spain, Sweden, and the United States** use item-response theory (IRT) to create scales and conduct analyses. In addition, **Portugal** noted that it is in the process of creating scales.

Canada uses performance levels on its School Achievement Indicators Project (SAIP). Students' performance is rated on two dimensions (e.g., science concepts and scientific inquiry skills), each of which consists of a five-level scale. Criteria for each performance level have been developed, which serve as the basis for assigning student responses to a performance level. Subsequently, **Canada** produces tables of the percentage of students who attain each performance level.

New Zealand uses a variety of methods to analyze assessments — one example is videos that illustrate different types of student responses; however, overall scores for individual subjects are not produced. **Sweden** relies upon qualitative analysis to score essays and other complex task items, using a combination of statistical analyses and expert judgments (i.e., the Angoff method).

Scoring

We asked countries to tell us who scores their assessments. We found that **Canada, Denmark, England, France, New Zealand, Portugal, and Sweden** rely on teachers to score tests. In **England** teachers are used to score their 7-year-olds' tests, and for 11- and 14-year-olds' tests, paid markers (most of whom are teachers) are employed. **Canada** and **Denmark** use Ministry of Education staff

and experts to score assessments, while **Belgium (French)** relies upon researchers. In **France**, teachers score the tests with assistance from the Assessment and Forecasting Division (DEP).

Furthermore, other experts are used by several of you. **Finland** relies on experts at the Institute for Educational Research (IER); **France's** national-level results are scored by DEP staff; and **New Zealand** uses staff from its National Education Monitoring Project. In both **Spain and the United States**, private firms are contracted to implement and score the assessment.

Network A Update

Since the Spring meeting, the Network has been busy finalizing indicators for *Education At A Glance III*, to which it contributed eight indicators. The Network also has been preparing for a meeting during the last week of October, which is being hosted by the United States and held in Paris. Major topics of discussion are expected to include continuing efforts to develop an approach for implementing the data strategy, future indicators, and areas of cooperation with Network C. We will update you on outcomes from the meeting in the next issue.

Network B Update

We are pleased to begin presenting updates from other networks, and we especially thank the new Network B chair, Allan Nordin of Sweden, for providing us with a Network B update! His contribution is presented below.

Among the Network B indicators, some can now be regarded as well established. This holds for such indicators as C01A & B on educational attainment, C11 on labor force

participation, and R21 on unemployment. Other Network B indicators have not yet reached this stage and must be modified or developed further.

One year ago, Network B began developing indicators on school-to-work transition. An ad-hoc group was formed and has identified several categories for describing the gradual change from full-time student status to full-time employment status. Additionally, in the area of social equity and education, preparations for new indicators have begun. Finally, Network B has already developed indicators on continuing education and training, which relate to the Human Capital Investment and Lifelong Learning initiative, both of which are areas of great interest to the INES Project. Network B will be continuing its work at the next meeting, which will be held in Paris from November 13 to 15, 1996.

Country Highlight: Spain



As promised in the previous issue, we are introducing a new feature to the newsletter—country highlights. We thank

Spain for serving as the initial country of focus and for so eagerly providing details about their educational assessment system. Many other countries indicated that they would like to be highlighted as well, so in the near future, we look forward to presenting highlights for other countries.

Overview of the Spanish Education System

In Spain's decentralized education system, the law mandates a basic compulsory curriculum for the whole country. The law further stipulates that the Autonomous Communities have authority over the remaining portions of the curriculum but, for the final stage of schooling, each school has the authority to determine the curriculum.

Spain's Ministry of Education and Culture, along with each Autonomous Community's Department of Education, is responsible for the operation and management of the education system. A Sectorial Education Conference—which is comprised of the Minister of Education and Culture and each Autonomous Community's highest ranking educational official—is the mechanism through which country-level educational decisions are made.

The National Institute for Quality and Evaluation (INCE), a dependent branch of the Ministry of Education and Culture, was created in 1990 when the decentralized education system was initiated; it began functioning in 1993. INCE is in charge of evaluating the general functioning and outcomes of the Spanish educational system, including evaluating the structure, scope, and results of educational reforms and innovations. It performs three main types of activities: (a) analyzing the efficacy and efficiency of the education system, (b) developing a national system of educational indicators, and (c) coordinating Spain's participation in international educational assessments.

INCE's organization

INCE is comprised of the following entities:

- The INCE Council (*Consejo Rector*) is made up of authorities from the Ministry of Education and Culture and a representative from each Autonomous Community. The INCE Council is responsible for developing a workplan that meets the general criteria and priorities established by the Sectorial Education Conference, submitting INCE reports to the Sectorial Education Conference, and establishing criteria for Spain's participation in international educational assessment projects.
- The INCE Director is responsible for planning and carrying out all aspects of INCE's work, as specified in the INCE workplan. The Director also develops proposals for new projects.
- A Scientific Committee is the consultative body made up of professors and other researchers who have scientific and professional standing in the field of education. This committee advises the Director regarding implementing the workplan as well as in developing assessments.
- A staff that is organized into the following areas: (a) evaluation of the education system, (b) international and research programs, (c) information and data analysis, (d) documentation and dissemination, and (e) administration. Each of these staff areas is comprised of work teams, technical advisors in evaluation, administrative staff, and grant recipients.

The Assessment Process

Each project that is developed and implemented by INCE first must be included in the workplan, which must be approved by the INCE Council.

Planning

First, a proposal is written by a team of experts at INCE. Next, a technical committee, which is composed of representatives from each participating Autonomous Community, presents the proposal to the INCE Council for approval.

Test development

A review of literature, statistical sources, and national and sub-national legislation serves as the basis for constructing tests and writing items. Data also is gathered regarding appropriate data collection strategies, which, in the past, have included direct observation, questionnaires, tests, and interviews (which were rarely used).

Piloting

After drawing the pilot sample, the pilot test is then carried out. The pilot test serves as the basis for item and questionnaire analyses.

Data collection

Once the final questionnaires and tests are developed, the Ministry of Education, together with the Autonomous Communities, draws the final sample. Typically, the sample of schools within each Autonomous Community is proportional to the school population, with a minimum number of schools required in order to make comparisons possible. Additionally, each Autonomous Community has the option of sampling a larger number of schools so that they may use the data for their own assessment. Matrix sampling is not used, therefore, each student receives the same achievement test. Additionally, information is collected using a questionnaire from schools, parents, students, and occasionally from teachers. A private firm, under contract to INCE, carries out the final data collection, including contacting the schools and administering the tests and questionnaires

(although recently teachers were used successfully as administrators), with INCE staff overseeing quality control activities.

Scoring and Analysis

INCE staff prepares the codebooks, and the scoring, data entry, and data cleaning are performed by another private firm under contract to INCE. The cleaned files are sent to INCE, where a final data cleaning and analysis take place.

Reporting

INCE experts interpret the results and write the final reports. One report is prepared for policy makers, another for experts and researchers, and other brief reports for the press. A brief report to schools is currently being considered. INCE's documentation and dissemination division handles the dissemination of assessment results.

Current Projects

At the national level, INCE has several on-going projects, including a Primary Education Assessment, Secondary Compulsory Education Assessment, Vocational Training Assessment, and National Indicators Project. Feasibility studies are currently being conducted on Families and Education, School Climate, Physical Education, and Pre-school Education. INCE also works on international projects, such as OECD's INES Project, TIMSS, the IEA's Language Education Study, Teaching and Learning the English Language, and various projects with South American countries.

Current Assessment Activities

Countries are engaging in many important assessment activities in the latter half of this year (June through December). These activities are described below and summarized in Table 3.

Test construction, development, and revision activities are being conducted as follows:

- **Canada** is holding four national expectations setting sessions for its science assessment. Also, it is revising its mathematics assessment material, on which a national field test will be developed;
- **Denmark** is developing an external assessment for this year's assessment;
- **France** is organizing and preparing assessments for year 3 (CE2), year 6 (6ème), and year 9 (3ème); also, preparations for a *Classe Primaire* (grade 1) pilot test are underway; and
- **Portugal** is developing its grade 9 assessment.

Coordination, preparation, and consensus building activities are occurring as follows:

- **Canada** is continuing its collaborative efforts among all jurisdictions regarding a planned national field test of its mathematics assessment; specific issues include the administrative design, student questionnaire, and redesigned assessment questions. Also, the final sample for its mathematics assessment is being determined;

- **England** is preparing school guidance for its 1997 assessments;
- **New Zealand** is in the early stages of developing ideas for its 1997 assessment;
- **Spain** is planning a new, primarily qualitative general evaluation of its education system;
- **Sweden's** fall assessments are being printed;
- **Turkey** is holding its annual meeting and seminar, at which teachers are given planning and guidance services regarding their on-going evaluations of students; and
- **The United States** is preparing subject field tests for reading, writing and civics. Also, it is constructing its 1998 assessment in civics, reading, and writing, and its 1997 assessment in visual arts, music, and theater for grade 8.

The following countries are engaging in pilot activities:

- **Canada** is administering a national field test in mathematics between July of 1996 and January of 1997;
- **England** is carrying out pilot activities for its 1997 assessments; and
- **Portugal** is conducting a pilot test of assessment items in November.

Data collection is underway in the following countries:

- **England** is completing data collection for its 1996 assessment;
- **France** is collecting data for its annual assessment of year 3 (CE2), year 6 (6ème), and year 9 (3ème) students; and

- **New Zealand** is administering assessment tasks in reading, speaking, music and technology in October.

Scoring and analyzing procedures are being conducted in the following countries:

- **Belgium (French)** is scoring and analyzing the data collected in March for its grade 7 assessment;
- **Canada** is analyzing results of its science assessment for 13- and 16-year olds (who completed one of two science components, either written assessment or practical tasks); a first draft of the public report will then be reviewed by all twelve jurisdictions. With regard to its mathematics assessment, **Canada** is coding student responses and is determining a sample of students for the final assessment. In November and December, results will be scored and analyzed from the mathematics field test, and final revisions of the assessment materials will be made;
- **England** is analyzing its 1996 assessment;
- **Finland** is constructing files, scoring, and analyzing data in all subjects;
- **France** will analyze data from its annual assessment of students in year 3 (CE2), year 6 (6ème), and year 9 (3ème);
- **Portugal** is coding and analyzing data collected in May for Portuguese (grades 4 and 6) and mathematics (grades 4, 6, and 9);
- **Sweden** is analyzing pre-test data and results from testing samples that were held this spring; and

- **The United States** is scoring and analyzing data from its 1996 assessment in science and mathematics.

The following reporting activities are transpiring during the second half of the year:

- **Belgium (French)** is reporting results for its assessment of grade 3;
- In November, **Canada** will seek the approval of deputy ministers and ministers of education on a public report on its science assessment. In December, the School Achievement Indicators Project's (SAIP) Science Public Report will be released to the public;
- **England** is preparing a publication of national summaries of 1996 results;
- **Finland** is reporting results across all subjects;
- **France** is publishing initial results from its year 3 (CE2), year 6 (6ème), and year 9 (3ème) assessment and is preparing a publication from its 1995 end-of-year assessment on year 9 (3ème) students;
- **New Zealand** is releasing reports on its 1995 assessments;
- **Spain** is planning on producing new reports based upon its 1995 data collection; and
- **The United States** is reporting results for its data collected in 1994 in reading, history, and geography.

Assessment Activities	Countries
Test construction, development, and revision	Canada, Denmark, France, and Portugal
Coordination, preparation, and consensus building	Canada, England, New Zealand, Spain, Sweden, Turkey, and the United States
Piloting	Canada, England, and Portugal
Data collection	England, France, and New Zealand
Scoring and analyzing	Belgium (French), Canada, England, France, Finland, Portugal, Sweden, and the United States
Reporting results	Belgium (French), Canada, England, Finland, France, New Zealand, Spain, and the United States

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