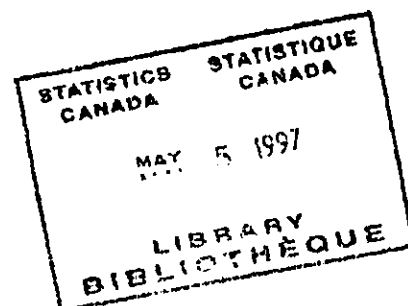
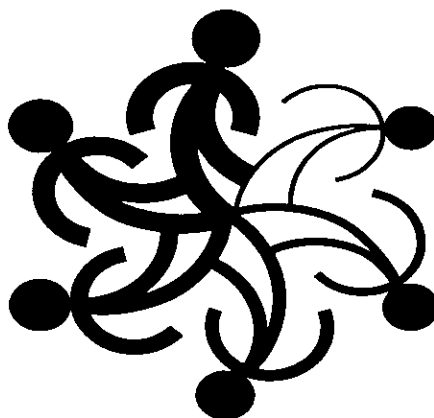




April 1997



## THE NATIONAL LONGITUDINAL SURVEY OF CHILDREN AND YOUTH, 1994-95

### INITIAL RESULTS FROM THE SCHOOL COMPONENT

*This report outlines some initial results from the School Component of the first cycle of the National Longitudinal Survey of Children and Youth (NLSCY). It covers information collected from teachers and principals for children aged 4 to 11 who were attending school in 1994-95 when first-cycle data were collected. This overview highlights the information newly available from this component of the survey; it is not comprehensive in its coverage or its analysis. Indeed, the information collected by the NLSCY is so rich and detailed that researchers and analysts will be using it to address a variety of important questions concerning the education of children and youth in Canada for many years to come. Here then, we are merely "scratching the surface" to stimulate awareness of this rich new data source, and to illustrate the kinds of analyses it makes possible.*

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### **The National Longitudinal Survey of Children and Youth (NLSCY)**

The National Longitudinal Survey of Children and Youth, a joint project of Human Resources Development Canada (HRDC) and Statistics Canada, is a comprehensive survey examining a wide variety of important factors thought to influence children's development. The survey collects information every two years on children as they grow up, as well as on the environments in which they live, learn and play.

The first cycle of the survey took place in 1994-95 and collected information on just under 23,000 children, from newborns to 11-year-olds. It gathered information on demographics, socio-economic background, child health and development, behaviour, relationships, education, literacy, leisure activities, family functioning and parenting, child care arrangements and family custody history.

In addition to a household-based interview with the person most knowledgeable about the child (most often the child's mother), the NLSCY uses a variety of methods to collect information on child development and functioning: mathematics computation and vocabulary tests; self-completed questionnaires (children aged 10 and 11 years only); and questionnaires completed by the child's school teacher and principal. These latter questionnaires provide unique information about the child's education, behaviour at school, and class and school environment.

Data are available on the behaviour and educational functioning of 7,000 of the 12,500 eligible school-aged children (from the teacher's questionnaire) and on school characteristics for about 6,900 children attending approximately 2,800 schools (from the principal's questionnaire).

Estimates in this report marked with an asterisk (\*) have a coefficient of variation between 16% and 33% and are less reliable than unmarked numbers.

A collection of analyses based on several components of the NLSCY (including parts of the household component, the mathematics computation test and the vocabulary test) was released in the fall of 1996 as a joint Statistics Canada/HRDC publication *Growing Up in Canada* (89-550-MPE).

### **Introduction**

Many studies have examined the influence of children's upbringing, home and school experiences on their development. These studies, however, often suffer from several limitations: They either examine children in other countries, use local samples that are not representative of Canadian children in general, or examine a limited number of factors in a single area of development.

To provide high quality information free of these limitations Human Resources Development Canada, in partnership with Statistics Canada, developed the National

Longitudinal Survey of Children and Youth (NLSCY). Results from this project will provide a national database of the characteristics and life experiences of a representative national sample of children as they grow from infancy to adulthood.

This report highlights some of the results from the first cycle of the school component of the project. It covers children aged 4 to 11 who were attending school in 1994–95 when the first cycle of the NLSCY was administered. The school component includes responses of teachers about the children's behaviour and school achievement, standardized tests of the children's academic achievement, and principals' responses about the children's schools. Results for children aged 4 are included for Manitoba, Ontario and Quebec, the provinces where junior kindergarten is offered. The children who took part in the study are distributed equally across kindergarten to Grade 6, with a small proportion (less than 1%) either in Grade 7 or in an ungraded class.

### **Few children had repeated a grade**

Children's teachers reported that relatively few children had repeated a grade. Only 1.7%\* of children had repeated their last grade and only 3.6% had repeated any grade during their schooling so far. It appears that repeating grades occurs most often in the primary school years (Grades 1 to 3) rather than in later grades (Grades 4 to 6). In the primary school grades, 2.7%\* of students repeated their last grade, with 4.2%\* of Grade 1 students and 3.2%\* of Grade 2 students having repeated their last grade. Smaller proportions of students in Grades 4, 5 and 6 had repeated their last grade.

### **Remedial programs somewhat more common than gifted programs**

Special education services include both accelerated instruction for students having advanced artistic and intellectual abilities (gifted programs), and modified instructional approaches for students who have physical, emotional, intellectual or behavioural problems that limit their ability to do school work (remedial programs).

According to principals, an average of about 12% of children in their schools had a learning disability. Further, principals reported that approximately 5% of the student body at their school had some form of an emotional or behavioural problem that affected their school work. About 3% of students at the children's schools were reported by principals as having a speech, hearing, vision, mobility or other health impairment serious enough to affect their learning.

One in 10 children received some form of remedial education during 1994–95. Children receiving remedial education often have multiple problems with the most common difficulties being a learning disability (51%) or an emotional or behavioural problem (23%). All other reasons for receiving remedial education (a physical disability, a visual, hearing or speech impairment, a mental disability, problems at home or problem with language spoken at school) individually characterized fewer than 15% of children in remedial education programs. Most often, children's remedial education was delivered

primarily with their classmates in a regular classroom with part-time attendance in a specialized classroom (59%), or exclusively within a regular classroom (16%).

About 7% of the children received some form of gifted education because of their advanced intellectual or artistic abilities. Most children receiving gifted education were either provided this service exclusively in their regular classroom (46%), or within their regular classroom with some limited time in a special class or resource room (33%).

### **Absenteeism and truancy not serious concerns**

Frequently missing school (absenteeism) and deliberately skipping school (truancy) do not appear to be serious problems among children aged 4 to 11. In fact, 11% of the children had not missed any days during the school year through absenteeism. The median (the point where half the values were higher and half were lower) number of days missed since the beginning of the school year was 4. A small proportion of children (4%), however, had missed 20 or more days of school—the equivalent of about one month of regular school or roughly one-tenth of the child's total instruction for the school year. It will be interesting to follow the development of this group in future cycles of the NLSCY.

Similarly, teachers reported that the vast majority of children (98%) had not skipped a single day of school, and only a small proportion of children (2%) had skipped one or more days of school. Analysis of the issue of truancy may become more relevant after future cycles of the NLSCY, when the children are older.

### **Parents often involved in their children's schools**

It is often thought that parental involvement in schools improves students' education by strengthening the link between home and school. There are many ways in which parents can get involved in their child's education: through direct activities such as meetings with their child's teacher and volunteering in their child's school, to less direct involvement such as supporting the educational efforts of the teacher and school through positive reinforcement. The various components of the NLSCY collect information on both direct and indirect parental involvement by asking teachers and principals to report on their perceptions of parental involvement.

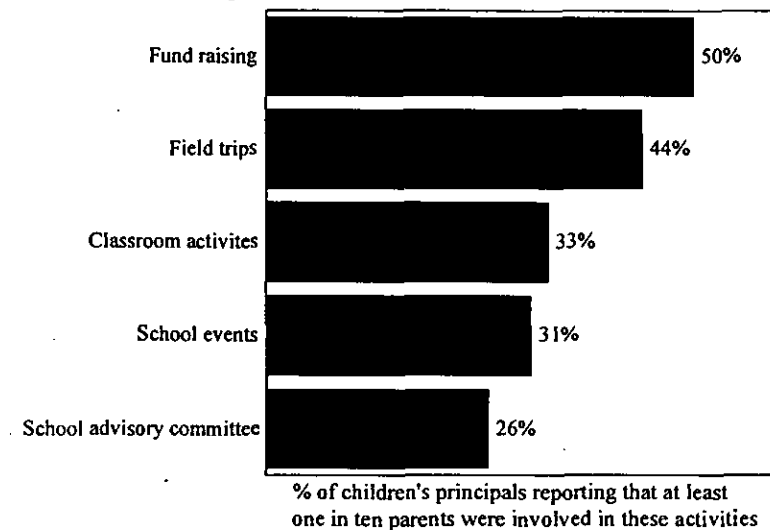
In general, the children's teachers reported that parents take an active role in their child's education. For more than 9 out of 10 children (94%), at least one parent had attended the regularly scheduled parent-teacher conference. Similarly, for about 7 out of 10 children (69%), the parents had called the teacher to discuss their child's education or behaviour at school. As well, for about one-half of children (52%), the teacher had telephoned the child's parents at some point during the school year; in 9 out of 10 of these cases (91%), the parents returned the phone call.

Teachers' perceptions also provide insight into more indirect aspects of parental involvement. According to teachers, the parents of the vast majority of children were

either “somewhat” (30%) or “very” (67%) involved in their child’s education. Similarly, teachers stated that most of the children’s parents perceived school to be “somewhat” (21%) or “very” important (77%). The children’s teachers also reported that most parents “somewhat” (23%) or “strongly” (75%) supported their teaching efforts.

The degree of parental participation at the school level is another dimension of parental involvement. Within the schools attended by children in the NLSCY, principals reported that large proportions of parents did not participate in certain types of school activities. For those who did, activities that can be accommodated on occasion more easily by working parents, such as fund-raising and field trips, were most common. Parents were less likely to be involved in activities that usually require an ongoing commitment, such as being involved with classroom activities, the school advisory committee, or helping with school events such as sports or plays. According to principals, parents were least likely to be involved in supervising children at the school.

For schools attended by children in the NLSCY, principals provided estimates of parental involvement in various activities



Source: National Longitudinal Survey of Children and Youth, 1994-95.

Children’s principals also reported on other aspects of parental involvement at the school level. For the vast majority of children, their principals stated that parents either supported (49%) or strongly supported (43%) the efforts of the school’s staff. Similarly, the parent advisory committee for most of these schools was perceived to be either active (41%) or very active (37%). Relatively small proportions of principals, however, reported that the parent advisory council had a considerable (33%) or strong (8%) influence on school policies or practices.

**Socio-economic status and academic achievement**

The way socio-economic status relates to academic performance is complex. This section presents some initial findings based on the teacher's assessment of children's abilities in various subjects, the children's actual performance on a mathematics computation test and whether or not they received special education. The exact nature of the relationship between socio-economic status and variables related to academic performance will be the subject of future research.

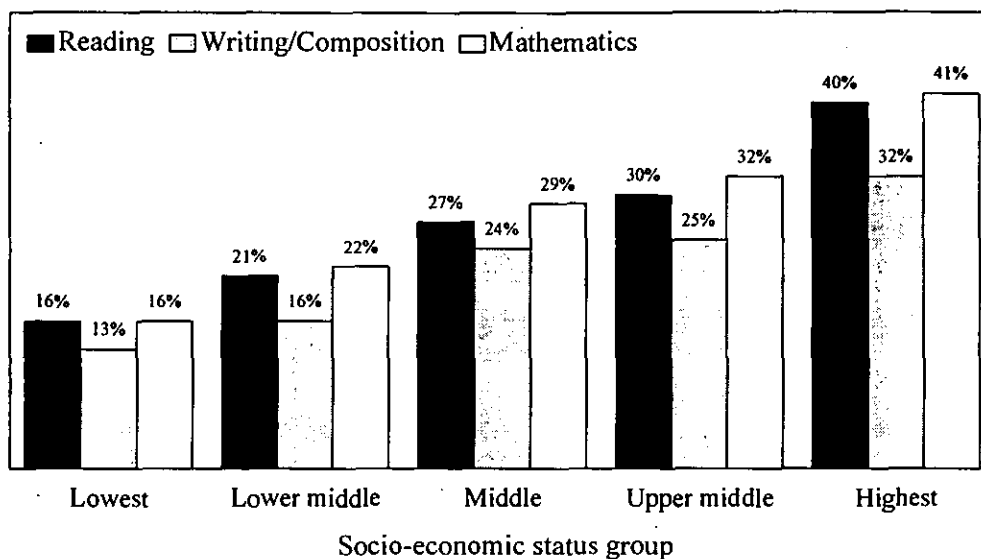
**Measuring socio-economic status**

The NLSCY includes a composite measure of socio-economic status, providing an opportunity to explore the influence of socio-economic background on Canadian children's academic functioning. This measure combines family income, parents' occupation and parents' education to arrive at an overall indicator of socio-economic status. For this analysis, five equally sized groups (or quintiles) were created, each containing 20% of the children according to their ranking in terms of family socio-economic status scores. Children whose families are in the top 20% of socio-economic status scores are considered to be in the highest socio-economic status group, while those in the bottom 20% are in the lowest socio-economic status group.

**Higher socio-economic status related to higher levels of academic achievement**

Children from the highest socio-economic status families were two to three times as likely to be rated by their teachers as being near the top of their class in reading, writing and mathematics, compared with those from families with the lowest socio-economic status. Performance on a standardized mathematics computation test showed a similar pattern across socio-economic groups. In comparison to children from the lowest socio-economic families, twice as many children from the highest socio-economic status families scored in the top 20% of all students on the math test.

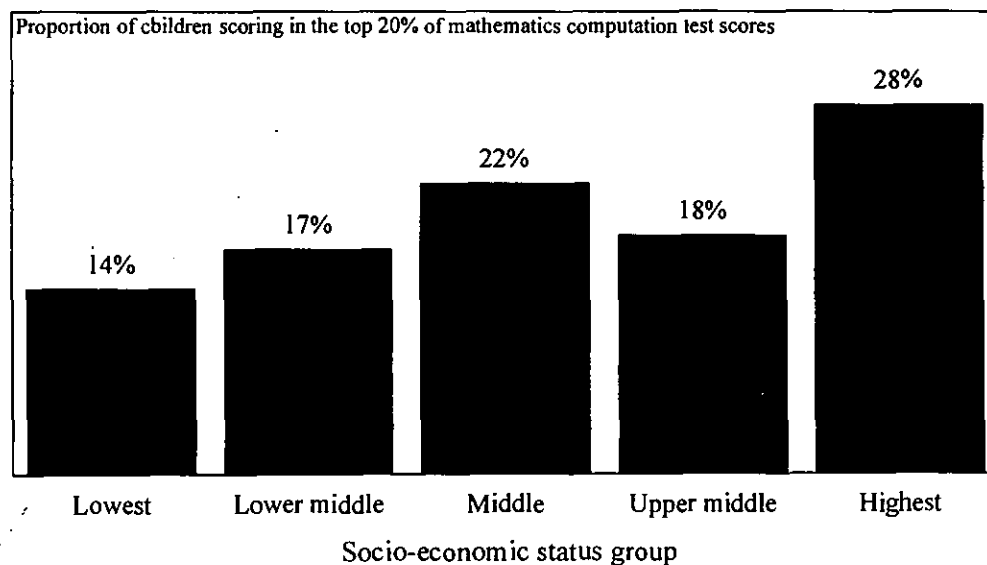
### Children from highest socio-economic status families most likely to be rated near the top of their class by teachers



Proportion of children ranked near the top of their class in various subjects by their teachers

Source: National Longitudinal Survey of Children and Youth, 1994-95.

### Children from highest socio-economic status families most likely to score well on mathematics test



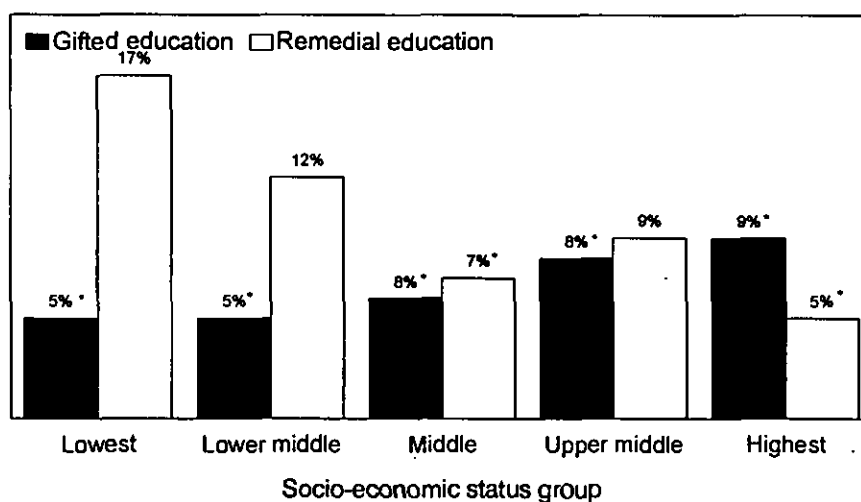
Source: National Longitudinal Survey of Children and Youth, 1994-95.



### Educational difficulties more common among children from low socio-economic status families

Children from low socio-economic status families (17%) were about three times as likely as those from high socio-economic families (5%\*) to be in some form of remedial education program. Conversely, in comparison with children from low socio-economic status families (5%\*), nearly twice as many children from high socio-economic status families (9%) received gifted education for an advanced academic or artistic ability. Furthermore, although relatively few children overall had repeated a grade at some time during their schooling (about 4%), the rate for children from the lowest SES families was about twice as high.

Children from highest socio-economic status families most likely to be in gifted education programs and least likely to be in remedial programs



\*Estimates less reliable than unmarked numbers.

Source: National Longitudinal Survey of Children and Youth, 1994-95.

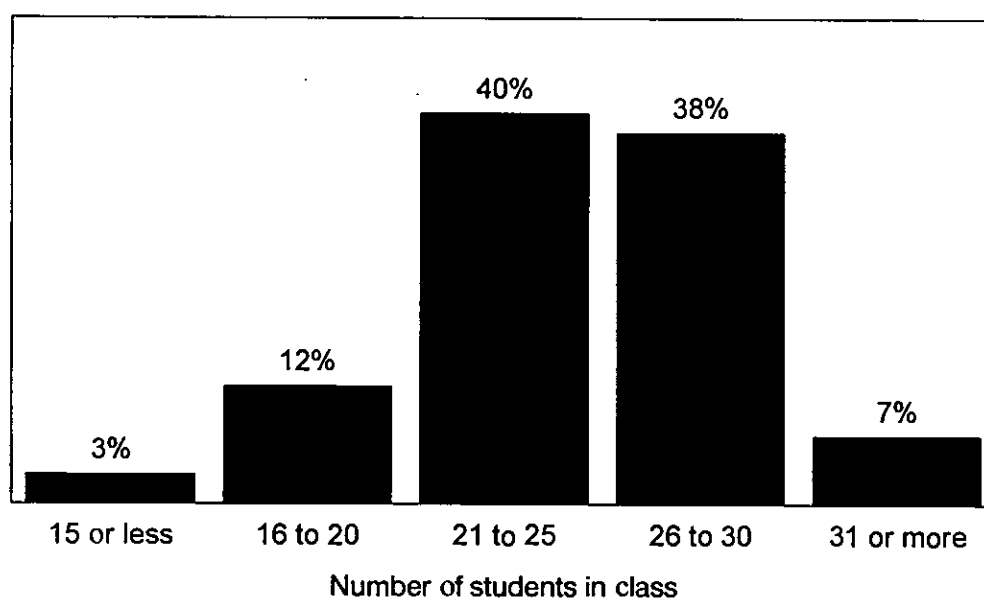
### More study needed

As important as these results may be, two factors should be kept in mind. Previous research using data from the NSLCY suggests that in Canada, socio-economic status may have less of an impact on children's academic achievement than in other developed countries where differences between social classes may be greater. Second, there are many other interpretations of the associations observed between socio-economic status and children's academic achievement and progress. Further analysis of data from the various components of the NLSCY and from future survey cycles will enable researchers and policy analysts to illuminate the nature of these relationships.

### Children's class sizes varied

The size of children's classes is an area of common concern to parents, educators and school administrators. In the NLSCY, information on the size of children's classes was collected for children enrolled in Grade 1 and above. Overall, the children's classes ranged in size from those containing fewer than 5 students to those with more than 40. On average, children's classes contained 24 students and relatively small proportions of children were in classes with fewer than 21 or more than 30 students.

#### Small proportions of children were in classes with fewer than 21 or more than 30 students



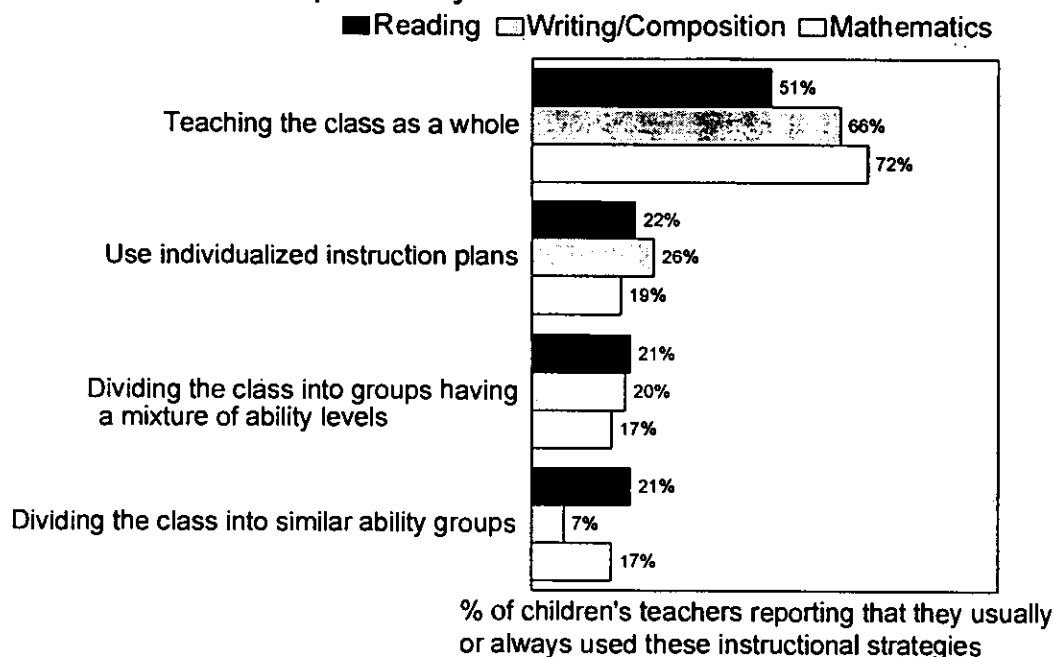
Source: National Longitudinal Survey of Children and Youth, 1994-95.

Roughly three-quarters of the children in the NLSCY were enrolled in classes that contained a single grade. About one in four children were learning in classes where more than one grade was being taught. An extremely small proportion of children (less than 2%) attended classes containing three or more grades.

### Teaching the class as a whole the most common approach

Teachers were asked how often they used a variety of instructional strategies to teach reading, writing (composition) and mathematics to their students. These strategies included teaching the class as a whole, dividing the class into similar ability levels, dividing the class into groups with a mixture of ability levels, allowing students to form their own groups, providing individualized instruction to students, or some other teaching strategy. Combining the responses "usually" and "always" for each strategy draws a picture of the instructional approaches used most often.

### Most common instructional strategies as reported by children's teachers



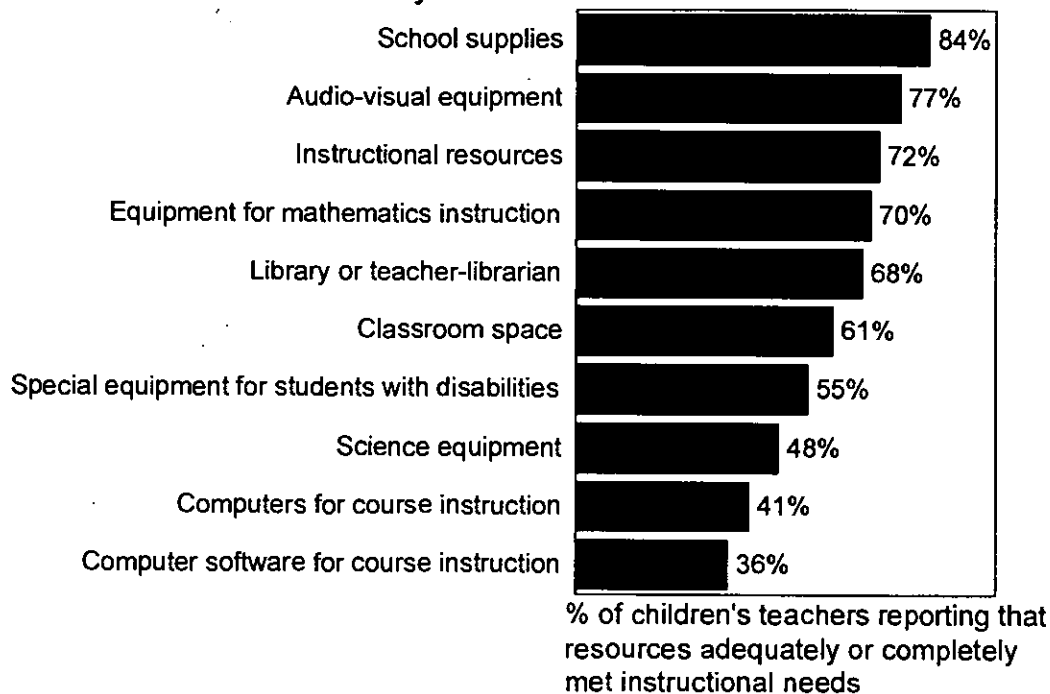
Source: National Longitudinal Survey of Children and Youth, 1994-95.

For children at all grade levels, teachers most often taught reading (51%), writing (66%) and mathematics (72%) to the class as a whole. Subdividing or mixing the class by groups according to ability was far less common. To some extent, these approaches reflect the teaching styles of individual teachers; however, policies may be in place that influence the type of educational strategy used.

### Resources generally considered adequate, but science and technology resources often lacking

The children's teachers were asked to rate the extent to which a variety of resources met the needs of their classes. Some reported that certain types of resources did not meet their instructional needs: specifically, the availability of computers, software and science equipment. Only 4 in 10 teachers (41%) stated that computers for course instruction adequately or completely met their needs. Similarly, just over one-third (36%) felt that computer software for course instruction was adequate. Less than half of all teachers (48%) considered science equipment in the classroom adequate. Given the importance of science and technology in contemporary society, this finding suggests that some children may not have access to certain relevant learning tools. For most types of materials and equipment, however, teachers felt that the resources in their classrooms adequately or completely met their needs.

### Science and technology resources least likely to meet class needs



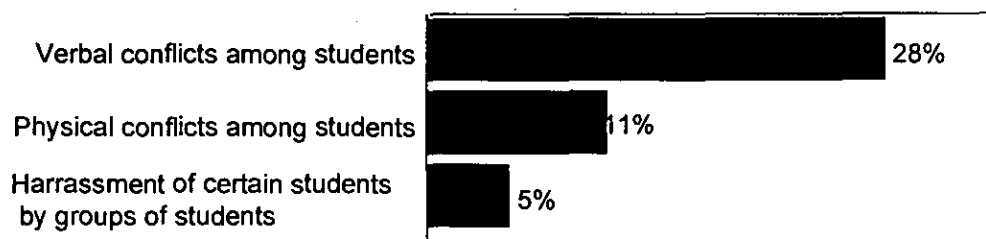
Source: National Longitudinal Survey of Children and Youth, 1994-95.

### Serious disciplinary problems rare in the children's schools

Principals of children in the NLSCY were asked to indicate how often they had to discipline students for a number of problem behaviours. An important factor to remember in evaluating the level of disciplinary problems is that the children covered were aged 4 to 11 and generally were attending kindergarten to Grade 6. As such, they and their schoolmates may have been less likely to be involved in serious disciplinary problems than older children.

The problems for which the largest percentage of principals reported "usually" or "always" having to discipline students included verbal or physical conflicts, and groups of students harassing individual students. Serious problems, such as using drugs, assaulting staff, carrying weapons and theft of staff belongings, were reported by more than 95% of the children's principals as "never" or "rarely" requiring disciplinary action.

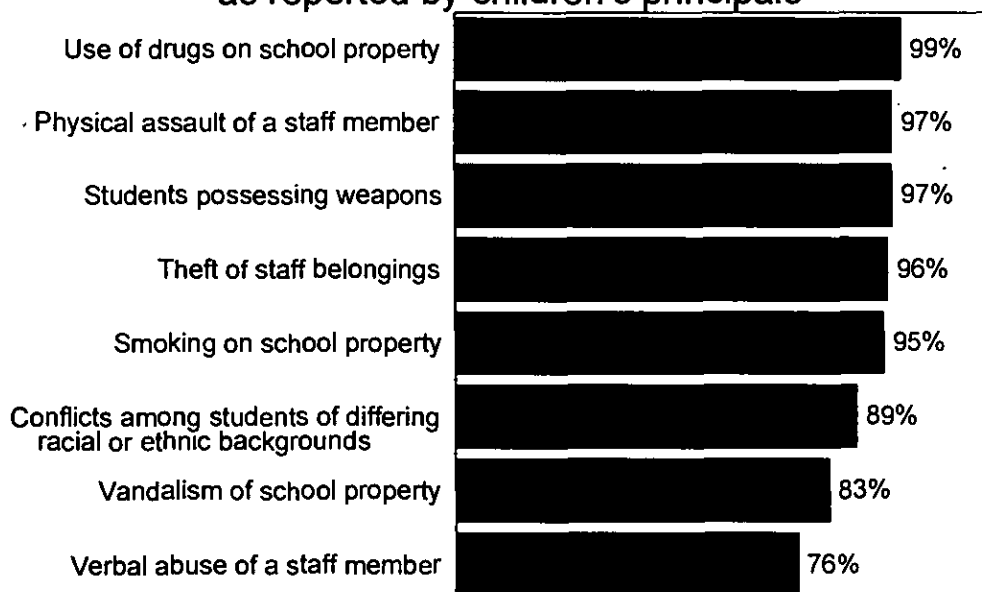
### Most common disciplinary problems as reported by children's principals



% of children's principals reporting that they usually or always had to discipline students for these problems

Source: National Longitudinal Survey of Children and Youth, 1994-95.

### Least common disciplinary problems as reported by children's principals



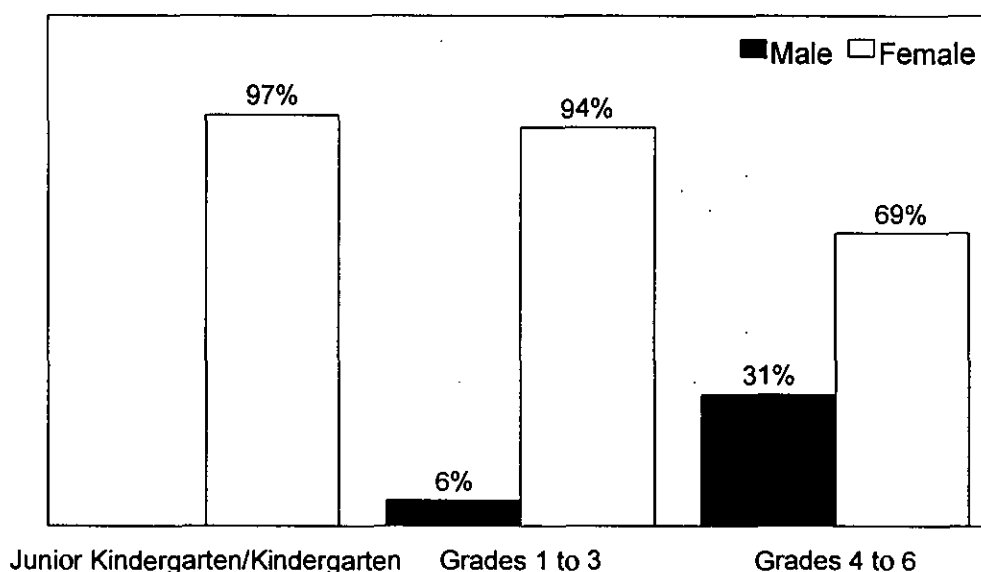
% of children's principals reporting that they rarely or never had to discipline students for these problems

Source: National Longitudinal Survey of Children and Youth, 1994-95.

### Children's teachers tend to be highly educated women

Across all grades, the majority of teachers providing instruction to children aged 4 to 11 were women (85%). Although women still accounted for the majority of teachers in Grades 4 to 6, men accounted for a larger proportion than they did in the earlier grades.

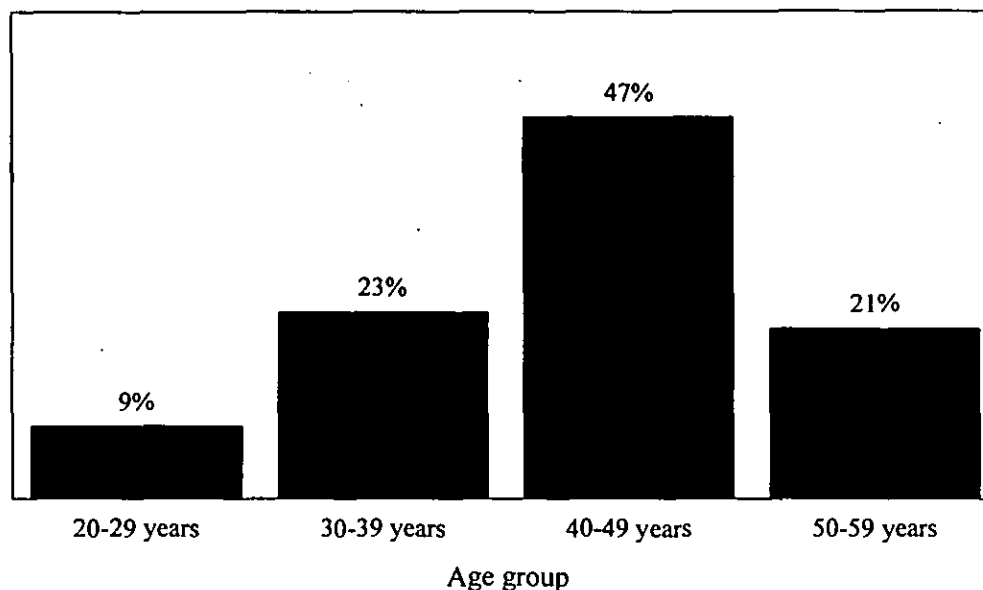
#### Children's teachers predominantly female, particularly in the early grades



Source: National Longitudinal Survey of Children and Youth, 1994-95.

For the majority of children, their teachers were middle-aged, with about 7 out of 10 teachers being between the ages of 40 and 59 years. Correspondingly, the teachers of these children were well experienced, with 7 out of 10 teachers having spent 11 or more years teaching. A comparatively smaller proportion of children's teachers had less experience: 16% had 6 to 10 years, and 15% had 5 or fewer years of teaching experience.

## Nearly half of the children's teachers were aged 40 to 49 years



Source: National Longitudinal Survey of Children and Youth, 1994-95.

The children's teachers were also well educated, with two-thirds holding a bachelor's degree as their highest qualification, 1 in 10 possessing a post-baccalaureate certificate, and 7% holding a graduate degree (either a master's degree or a PhD). About 16% of the children's teachers did not hold a university degree. Of the teachers without a university degree, nearly all (96%) were over the age of 40. Some of these teachers may have entered the profession at a time when a university degree was not universally required.

## Principals tend to be well-educated males between the ages of 40 and 59

Principals play an important role in students' education. They act as the educational leaders for their schools, are often the major disciplinarian, and may have substantial control over the school's policies and workings. Yet, despite their important role, information on even the most basic characteristics of principals is often not available. Fortunately, the NLSCY collects such information for the schools attended by children in the survey.

As a group, the children's principals tended to be male, middle-aged, well educated, and highly experienced in their jobs. The vast majority of children's principals were aged either 40 to 49 (51%) or 50 to 59 years (43%), and male principals outnumbered their female colleagues by a margin of two to one.

The majority (63%) held a graduate degree (MA, M.Ed or PhD/D.Ed) as their highest degree, while a smaller proportion's highest qualification was a bachelor's degree (27%). One of every 10 principals had completed a post-graduate certificate as their highest level of education.



On average, they had 11 years of experience as principals, although the range of experience varied from 1 to 37 years. Virtually all had previously been teachers, averaging 15 years of teaching experience before becoming principals.

\* \* \*

*These are the initial results from the first cycle of the NLSCY's school component. Combined with those from other components of the survey (the interview with the child's parent, the math and vocabulary tests, and the self-completed questionnaire for older children), they provide a rich and unique resource. Data will be collected in subsequent cycles of the NLSCY as these same children enter youth and then adulthood, allowing for longitudinal analysis of issues related to education and child development.*

*A public use microdata file based on the school component of the initial cycle of the NLSCY will be available later in 1997.*

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