

A FOURTH SURVEY OF READING COMPREHENSION IN DUBLIN CITY NATIONAL SCHOOLS*

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The survey reported here is the fourth in a series of surveys of reading comprehension of eleven year old pupils in Dublin city schools. Previous surveys were carried out in 1964 1969 and 1974 the present one in 1979. In each survey, pupils in a representative sample of Dublin city schools took the NS6 Reading Attainment Test. The findings of the present survey are based on the performance of 1,123 pupils in 22 schools. Mean performance in 1979 was 111.17 ($SD = 13.70$) as against 100 ($SD = 15$) in 1964. A significant difference in attainment between the 1974 and 1979 samples, in favour of the latter, was recorded.

In 1964, the Dublin Teachers' Study Group carried out a survey of the attainment in reading comprehension of eleven-year old Dublin city schoolchildren (5). Since then, the survey has been repeated at five yearly intervals. No significant change in reading standards was found to have occurred between 1964 and 1969 (7), however, a significant improvement occurred between 1969 and 1974 (11).

The survey reported in this paper is the fourth in the series and was carried out in May/June 1979. Its aim was to estimate the average level of English reading comprehension of school children aged between 10 years 9 months and 11 years 8 months attending Dublin city national schools and to compare this standard with those obtaining for children in the same age range in previous surveys.

* The members of the Teachers' Study Group survey sub-committee which conducted the survey were Helen Rogan, Denis O'Sullivan, Michael Travers and Noel Ward. The group acknowledges the assistance of the following in conducting the survey: P. McGee, Special Education Department, St Patrick's College, Dublin; R. O'Reilly, V. Greaney and P. Fontes, Educational Research Centre, St Patrick's College, Dublin; the staff of the Statistics Section, Department of Education; the principals, invigilators, teachers and pupils in the sample schools.

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METHOD

Sample

The population consisted of all primary schools in the Dublin city area, as defined by the Department of Education, excluding special, private, and hospital schools, and schools which did not cater for children in the specified age range. There was a total of 192 schools in the population. These schools were stratified into four categories on the basis of size, which was defined in terms of the number of teachers at Standard 2 and above: 1-2 teachers, 3-6 teachers, 7-12 teachers, and 13+ teachers. A 12½% stratified random sample of the schools was selected. It was planned to test all children aged 10 years 9 months to 11 years 8 months attending the sample schools. The sample consisted of 23 schools with a total population of 6,424 pupils (Table 1). The number of pupils in the age range for testing was 1,286.

TABLE 1
NUMBER OF SCHOOLS ACCORDING TO SIZE
IN POPULATION AND IN SURVEY SAMPLE

Size of school	Schools in population	Schools in sample
1-2 teachers	19	2
3-6 teachers	73	9
7-12 teachers	59	7
13+ teachers	41	5
	<hr/> 192	<hr/> 23

Test

The test used was the NS6 Reading Attainment Test, which had been designed and standardized by the National Foundation for Educational Research in England and Wales. This test was used in the previous surveys of this series*. It is a reading comprehension test consisting of 60 incomplete sentences which the pupil must make 'sensible' by choosing the correct word from five alternatives provided.

Procedure

Teachers were appointed to administer the test in each school following briefing by members of the research sub-committee. Testing

* On this occasion, pupils also took the Drumcondra English Test, Level III, Form B (vocabulary and comprehension sub tests). This was to allow a number of options in selecting tests for future surveys in this series.

was carried out on, and in some cases shortly after, May 23rd 1979. Completed tests were scored by members of the research sub committee.

In the 22 schools which returned results*, there were 1,216 pupils eligible for inclusion in the survey. Of these, 1,123 (92.4%) were tested. On this occasion, because of postal and communication problems, it was not possible to test all absentees at a later date as had been done in previous surveys. About 20% were subsequently tested and these are included in analyses.

RESULTS

A table of norms with a mean of 100 and a standard deviation of 15 was drawn up for the 1964 survey data. In 1969, the mean score was 99.12 ($SD = 15.47$) while in 1974, it was 106.74 ($SD = 15.91$). The mean recorded in the present survey was 111.17 ($SD = 13.70$). A *t*-test between the mean scores for 1974 and 1979 yielded a significant value ($t = 7.30$, $df = 2448$, $p < 0.001$). A comparison of the frequencies of scores in different score ranges for 1964, 1969, 1974, and 1979 indicates that the improvement in test performance in 1979 occurred right across the range of reading ability (Table 2).

TABLE 2
FREQUENCIES OF SCORES IN THREE SCORE RANGES
1964-1979

Score range	Percentage scoring within range			
	1964	1969	1974	1979
115+	15.87	15.62	31.50	40.00
85-114	69.10	69.29	60.70	58.00
84	15.03	15.09	7.80	2.00

The stratification of the sample allows for a comparison of the performances of schools of different size. Mean scores for pupils in schools of different size were as follows (with standard deviations and numbers of pupils in parentheses): 1-2 teachers $M = 115.60$ ($SD = 13.56$, $N = 15$), 3-6 teachers $M = 113.48$ ($SD = 13.45$, $N = 172$), 7-12 teachers $M = 111.53$ ($SD = 13.55$, $N = 410$), 13+ teachers $M = 110.01$ ($SD = 13.81$, $N = 526$). There is a general trend for pupil

* Returns for one school in the 7-12 teacher category did not reach the research sub-committee.

mean score to be inversely related to size of school. An analysis of variance of attainment score by school size yielded a significant F value ($F = 3.52$, $df = 3,1119$, $p = .01$) Scheffe post-hoc comparisons yielded only one statistically significant difference (at the .05 level) between pairs of means however, pupils in large (13+ teachers) schools performed significantly less well than pupils in medium-sized (3-6 teachers) schools. Tests in the survey were completed by 509 boys and 614 girls. The mean score for boys was 112.96 ($SD = 13.52$) and that for girls 109.69 ($SD = 13.69$), representing a significant difference in favour of boys ($F = 16.11$, $df = 1,1121$, $p < .001$)

DISCUSSION

The findings of this survey show that an improvement has taken place in the standard of reading comprehension, as measured by a standardized test, of eleven-year old Dublin school-children in the five-year period 1974 to 1979. The mean raw score of the children rose from 24.71 to 28.21 during this time, in terms of standard scores, the mean score increased from 106.74 to 111.17. The improvement goes back further than 1974. Over the fifteen-year period, 1964 to 1979, mean raw score rose from 19.95 to 28.21 or, in standardized score terms, from 100 to 111.17. These figures may be taken as indicative of considerable improvement in reading standards in Dublin schools.

One of the aims of the 1964 survey was to compare reading standards in Dublin with those in England. A comparison of the 1964 Dublin data with data obtained in England on the same test in 1960 revealed a difference in favour of eleven year old English children of almost 10 points in mean raw score (8). The most recent figures available — those of the present survey, for which the mean raw score was 28.21, and those of a survey carried out in England in 1976/77, for which the mean raw score was 31.13 (3) — show that the gap between Dublin and English eleven year olds has been reduced to about 3 points.

The improvement in the performance of Dublin children, both relative to earlier surveys in Dublin and to English data, is so striking that one has to ask if the test results can be taken as a true reflection of students' reading achievement (4). A number of issues are relevant to a consideration of this question. One relates to absenteeism in the 1979 survey, not all students who had been absent on the day of testing were subsequently tested as had been done in earlier surveys. The performance of absentees was found to be 4.37 points below that of

the total sample in the 1969 survey (7), though there was no difference in the 1974 one (11). If in the present survey the performance of absentees who were not tested would have been lower than that of the general sample, then their inclusion would have resulted in a slightly lower mean score for the total sample.

Other points that might be relevant to a consideration of comparisons of test performance over time are the comparability of samples and populations, the suitability of the test, and pupils' familiarity with standardized tests. In the present series of surveys, the population of schools was always defined in the same way, though the characteristics of that population may have changed somewhat. The sampling procedure was identical in the 1969, 1974, and 1979 surveys. Differences associated with the population or the sampling of the population do not seem likely to account for the improvement in test performance.

Concern has been expressed about the 'ageing' of the NS6 test (2, 9), tests used over a long period of time may not adequately represent curricula or even common language usage which changes over time. However, a comparison of the difficulty level of items based on item analyses of the 1964 and 1974 data indicated very little change in the difficulty level of individual items (8). On the evidence available, it seems unlikely that 'ageing' of the test significantly affected the performance of pupils.

There is little doubt that Irish pupils' familiarity with standardized tests has increased in recent years, so too has their familiarity with workbooks which employ a format similar to that used in many standardized tests. While short term coaching and practice on another standardized test was not found to affect subsequent performance on the NS6 test in one study (5), the long term effects on test performance of familiarity with test materials and format and of changes in attitudes towards tests and other forms of evaluation cannot be ruled out (4).

Two final aspects of the findings of the present survey merit comment. The gender difference, in favour of boys, must be regarded as surprising. No consistent gender difference was found on the NS6 Attainment Test in British studies while previous studies in the present series (7, 11), as well as one which used the same test with post primary school students (10), did not reveal differences either. Differences associated with the gender of students attending a school have been reported in the case of the Drumcondra Attainment Tests with larger samples of Irish pupils. For English and Irish reading, in both Standards

3 and 5 in primary school, the performance of pupils in girls' schools was found to be superior to that of pupils in boys' schools (6) In secondary schools, however, in both first and third year, the performance of boys on an English reading test has been found to be superior to that of girls, a finding that may reflect a selection factor (1) The findings of the present survey may be due to a bias in the samples of boys and girls who participated in it

Differences associated with the size of school were found in the present survey The 1969 survey found no such differences (7), while the 1974 one reported a tendency for pupils in smaller schools (up to 6 teachers) to perform less well than pupils in larger schools (11) The present findings differ from those of the 1974 survey since they indicate that pupils in medium-sized (3-6 teachers) schools did better than pupils in larger (13+ teacher) schools The small number of pupils in some of the size categories may account for the instability of these findings

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