Education and Test Scores

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In 1976 James Callaghan at Ruskin College gave a speech on falling standards in education which led to what is know as the Great Debate and this in turn led to the introduction of the 1988 Education Reform Act.

Two of the main purposes behind the National Curriculum which has been important implications for assessment are:

- to raise standards
- to improve performance in Scientific & Technological areas

There is nothing new in this for a similar desire was expressed at the Great Exhibition in 1851 and again at the Festival of Britain in 1951.

The Education Reform Act (ERA) [1] was passed by Parliament and given the Royal Assent in July 1988. With the passing of this Act much of the choice, that previously existed, was removed from schools and local Education Authorities. Chapter 1 section 2 of the Act requires the curriculum in maintained schools to comprise a basic curriculum to be known as the National Curriculum. From now on the National Curriculum applies to all pupils of compulsory school age (5 -16 year olds) being educated in schools in the maintained (state) sector. This includes any Grant Maintained (opted out) schools but does not include the following:

* nursery schools
* nursery classes in primary schools
* City Technology Colleges (CTC's)
* independent schools

The National Curriculum

This sets out what every child should know, understand and be able to do at each stage of their education. The childrens' progress is to be tested regularly. The National Curriculum is made of 10 subjects, also some topics that cross the subjects. The subjects are: English, Mathematics, Science, Technology, Geography, History, a Modern Foreign Language, Art and Music. The other topics include health and sex education, industrial and economic awareness and education about the environment. The National Curriculum sets targets for pupils to reach in each subject. These targets are set at 10

levels, and as a general rule, children will move one level every 2 years, but not all children will move at the same speed. The progress of children is to be watched by the teachers as part of their every day work, but there are also national tests which every child will take at the ages of 7, 11, 14 and 16. Tests for 7 and 14 year olds are already happening, those for 11 year olds will be introduced in 1994. These tests are known as Standard Assessment Tasks or more commonly referred to as SATs.

It will take most of the 1990s before the National Curriculum has spread through the school system. Each subject is being phased in gradually, starting with the youngest children in primary and secondary schools. Special committees were set up to recommend what children of different ages should learn in each of the subjects. In September 1989 the three core subjects, English, Mathematics, and Science, were started, followed by Technology in 1990. The others are being introduced year by year in the order: History and Geography, a Modern Language, and finally Art and Music. Although 5 and 11 year olds should have made a start on all subjects by 1992, it will be 1996 or later before it has spread right through every age group. The table below illustrates the ages, year group and key stages that pupils are following.

Age	Year Group	Key Stages
5	Reception	1
6	Year 1	1
7	Year 2	1
8	Year 3	2
9	Year 4	2
10	Year 5	2
11	Year 6	2
12	Year 7	3
13	Year 8	3
14	Year 9	3
15	Year 10	4
16	Year 11	4

Levels: The National Curriculum has been drawn up at ten different levels to cover the whole 5 to 16 age group. Level 1 is the simplest and represents the sort of work five year olds will do when they start school, whilst level 10 will only be achieved by the most able 16 year olds.

The following analysis of results have been carried out on the 7 year old pupils at Key Stage 1 i.e. the 1991 First National Pilot which was supposed to be unreported and the 1992 First Reported run.

Three Schools results are chosen to highlight certain features which the raw results in themselves would not explain. The schools are referred to as School 1, 9 and 13. School 1 is a small Roman Catholic church school with 210 pupils of whom 29 pupils did Key Stage 1 SATs during 1991. This school is situated in an affluent north London suburb. School 9 is an inner city refugee status school with 305 pupils of whom 74 pupils did Key Stage 1 SATs in 1991 and 77 did Key Stage 1 in 1992. School 13 is situated in Kent and has a high proportion of special needs pupils. Its size is 250 pupils with 35 Key Stage 1 SATs 1991 results. The head of this school could have applied to have the majority of his pupils exempt from the testing but felt that there was no need to identify extra differences between the special needs pupils and the rest of the pupils of the same age. He wanted to have all the children treated the same.

Results

1991 SATs English

By looking at the raw results and if we assume that we do not have the information given above what can we deduce? School 1 has the majority of pupils at level 2, which is what the government expect to happen, whereas School 13 has the majority of its pupils in level 1 which would indicate that the school is failing their pupils.

John Patten, the secretary of state is noted for saying "Publishing test results will help to identify schools and teachers that are failing their pupils .. The data is vital for schools, pupils and parents." [2]

Education Minister Baroness Blatch: "Raw test results show precisely what students have achieved at school. The raw results are unadulterated by any subjective information." [2]

The Parent's Charter on publication of national curriculum assessment results [2]: "A single measure of each school's performance in reading (primary schools) and in each subject (secondary schools) will enable parents to use comparative tables to identify the strengths and weaknesses of each school."

It should be stressed here that the raw results for 7 year olds do not necessarily reflect the school apparent weakness at teaching English. Pupils

results are greatly influenced by their previous experience. The contribution of the school, its 'value-added', can only be measured by studying the progress of pupils, that is the difference between their initial and final achievements. This has been confirmed dramatically in a recent survey of A level results in the Guardian newspaper [3], where school and colleges were grouped into 3 categories on the basis of their average exam performance. Nearly half changed their category when 'value-added' scores were used instead of 'raw' results. However, primary schools have no measure of intake and so have no way of calculating the value added information. Do we test on entry to obtain this information? Is it possible, will it be standardised, these are some of the questions posed here.

James Meikle, Education Editor of the Guardian [4] on 16th March 1993 - "The Government and its exam advisers last night brushed aside research indicating that children's test results at seven are influenced by their family background and previous education. The only concession it may make is for schools to identify the number of children who have had fewer than 6 full terms in school."

Leeds University researchers found that socio-economic backgrounds exercised a strong influence on pupils' performance in tests at seven. Children who had been to nursery school did better than those who had not. Pupils for whom English was a second language did worse than native speakers. The research into last summer's tests, commissioned by the National Union of Teachers (NUT) [5], echoed in many respects the finding of the Leeds team on the 1991 tests for the School Examinations and Assessment Council. An interesting feature of School 9 is that 75 per cent of the pupils obtained level 2 or above even though the majority of the pupils have English as a second language.

1991 SATs Mathematics

School 1 has all the pupils at level 2. Why? Further investigation revealed that the teacher had not covered any of the work needed for the higher level and so due to pressure of time did not attempt to try any pupils for level 3. School 13 had low results, even lower than their English results. School 9 had approximately 63 per cent of its pupils at level 2. Does this infer anything about the teaching of mathematics in these schools? The office for Standards in Education has published reports based on the evidence collected by Inspectors during more than 7,000 lesson in primary, middle and secondary school in 1991-92. The reports show that for Key Stage 1 there was no evidence of improvement in mathematics.

" The poor quality of senior staff for implementing the mathematics

curriculum was blamed for unsatisfactory results." [6]

1991 SATs Science

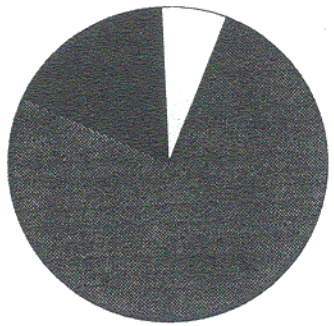
The results for school 9 appear to be better than the other 2 schools. Do we conclude that this school is better at teaching science than the other two? Bearing in mind that this school has a large refugee population intake. Could we conclude that language is not a barrier for science . Further investigation revealed that these pupils had an interpreter, for a high proportion of the pupils, to explain in the pupils mother tongue what was required. The interpreter also translated the pupils responses. Earlier results for English showed that these pupils had reasonable English scores. More questions than answers can be raised here, for example what can we deduce for the above raw results? As a performance indicator what do they mean? are many questions that have raised concern amongst educationalists.

1991 and 1992 Key Stage 1 SATs Results for School 13

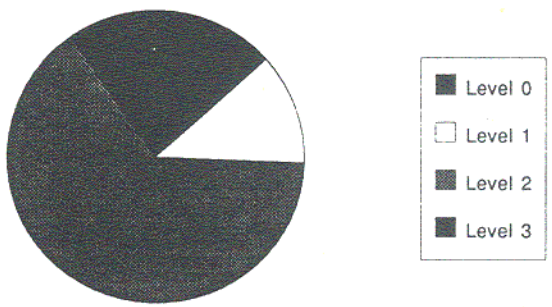
It is expected that schools will learn from experience and hence SATs results should improve. By looking at the pie charts drawn we can clearly see their is an improvement in raw results for school 13 for all three core subjects tested. Does this mean that the school has improved its teaching? or now understands the form of assessment more clearly? It must be pointed out that these are not the same pupils being tested for 2 years but a different cohort for 1991 to that of 1992. Without any further information we are likely to say that the school has improved its test results, however on interviewing the headmaster it was discovered that the school entrance policy had changed and that the number of special needs pupils had decreased significantly and so the 1992 cohort contained a much smaller proportion of special needs pupils. Now what can we conclude from these results?

1991 SAT's English

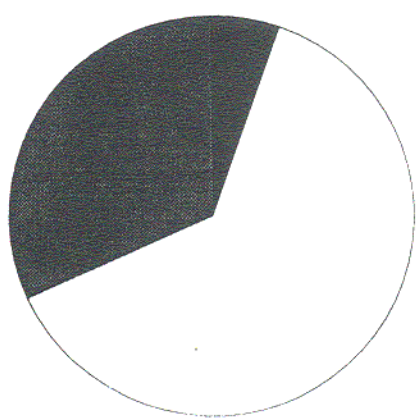
School 1



School 9

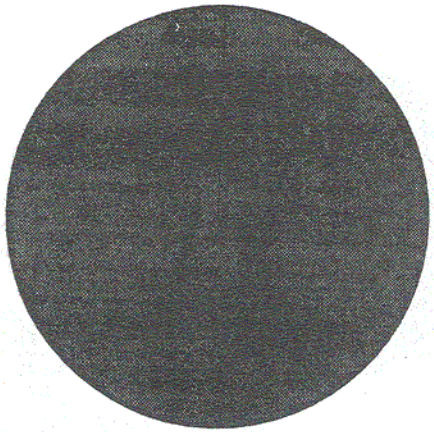


School 13

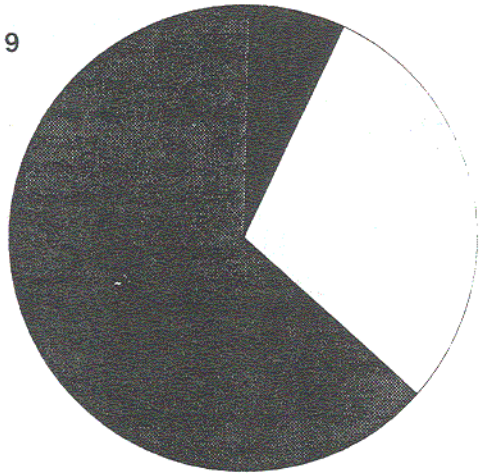


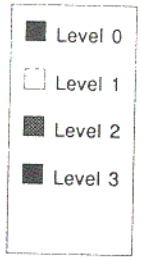
1991 SAT's Mathematics

School 1

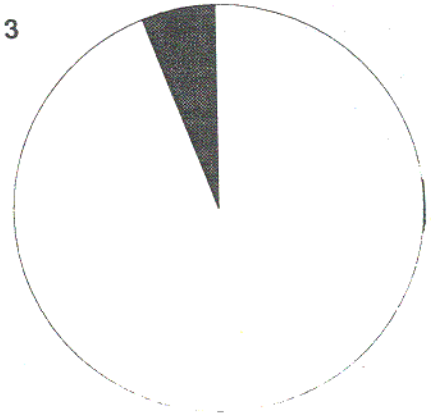


School 9



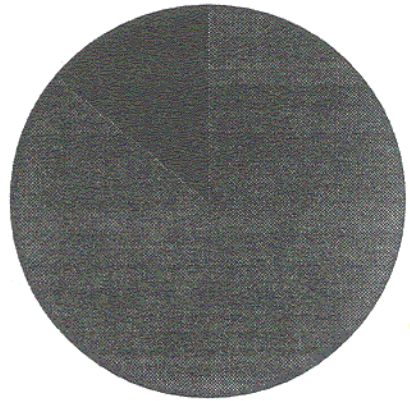


School 13

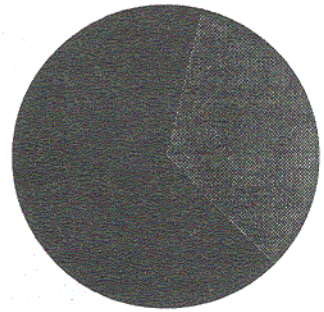


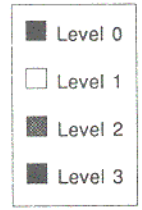
1991 SAT's Science

School 1

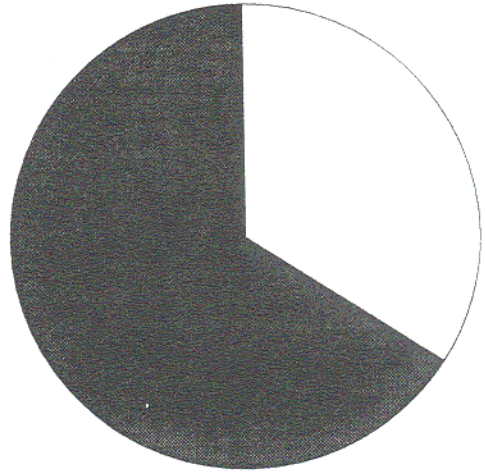


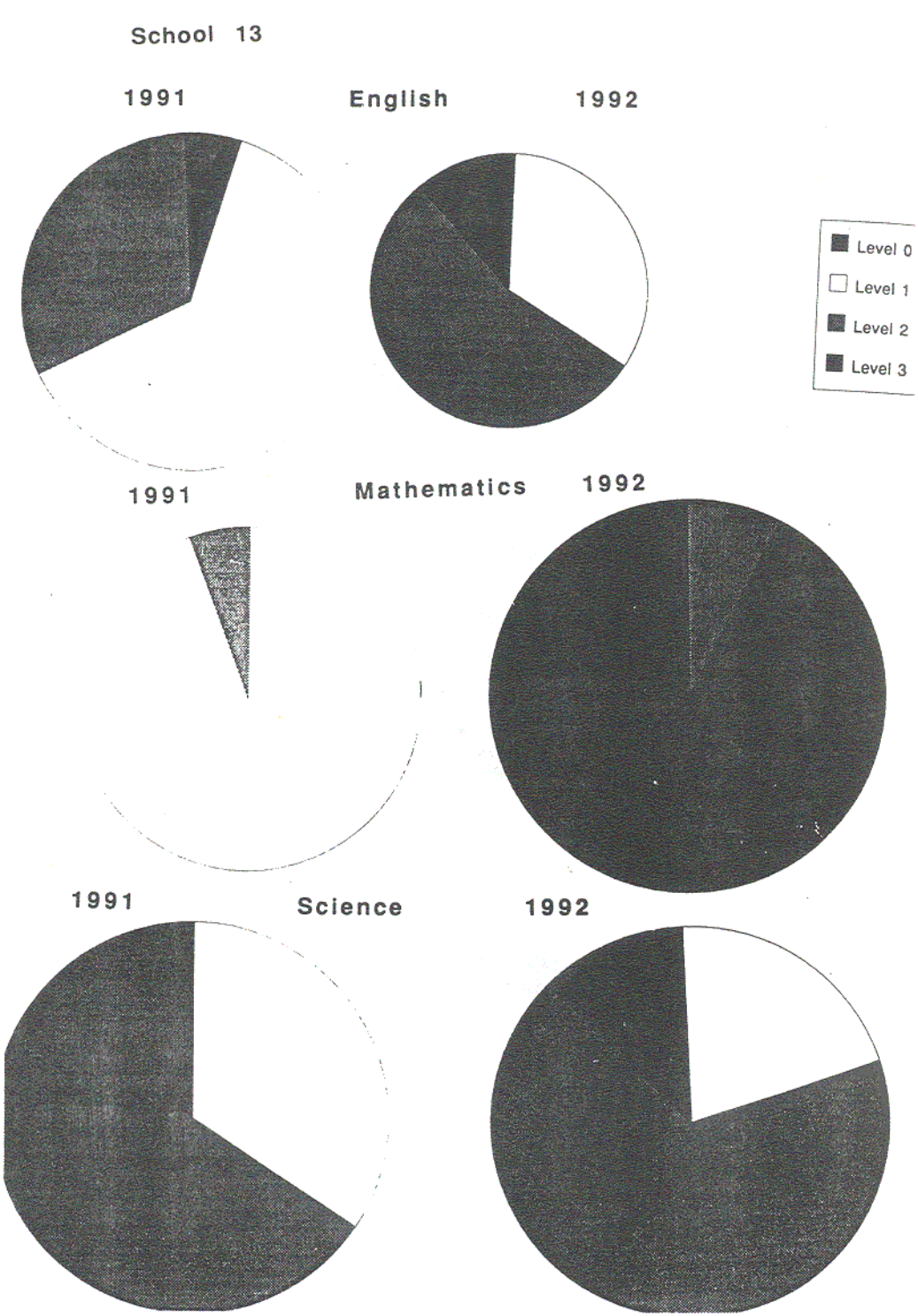
School 9





School 13





Conclusion

We are led to believe that we have a right to education, but when it comes to choosing a school, how do you judge? Whether the school is near where you live, the size of the classes, the reputation of the school or the SATs results. All these things are important but is any one more important than the other?

Raw results can be dangerous and often misleading. Are they reliable and if so what do they tell us about a school? The Government has produced league tables for the GCSE and A level results and is preparing to publish these SATs results for each Key Stage. In the Times Educational Supplement [7], 18th October 1993, it was reported that seven organisations claiming to represent 10 million parents have sent a letter to the prime minister criticising school league tables. They said the tables failed to satisfy parent's needs for accurate and relevant information, and that they were appalled at the 1.4 million cost of distributing the lists. If this is the cost so far what will be the cost when all key stages are included and at the end of the day are parents/pupils/employers better informed? The NUT has stated that test results should be reported to parents but there should be no ranking of pupils or schools or local authorities.

The national syllabus concentrates on the timetabled curricula and ignores the wider curriculum which arises from a school's own ethos and values. It uses testing to drive the content of education and to encourage a climate of failure. It reduces teachers to the status of technicians who 'deliver' a service.

Finally if the government intend to use SATs results as performance indicators then perhaps the following issues ought to be addressed first before the league tables for each Key Stage are produced. Some areas of concern are:

1) Who makes the decision of what is to be measured and why. A performance indicator must have a reason for being recorded to help prevent misuse.

2) The areas of usefulness of the indicators should be scrutinised and who are the people that need to know them.

3) Are the performance indicators providing value for money i.e. cost of assessing and collecting information may be greater than its value.

4) Should value added information be used and in what form.

5) One must be careful of 'number worship' i.e. a school or pupil achieves the magic number and as long as the number is right then everything is deemed to be OK.

6) What is the accuracy and precision of the performance indicator? it will be no good if the errors are too large. Precision should be clearly defined and all schools use the same criteria. Some of the SATs were interpreted in different ways by schools.

7) What is the reliability of the indicators and do they measure performance?

8) What is the validity of the indicators?

9) Agreement needs to be reached on how the performance indicator should be used and what to do if these indicators are high or low.

10) In Education we must strive to do something positive rather than say school A is better than school B we should attempt to arrange something positive for school B to help them.

The above list is by no means exhaustive. Professor Desmond Nuttall, Institute of Education speaking on Meridian ITV, 18th October 1992 said:

"I think they are telling you not so much how good the schools are and how good the level of education is but how much privilege there is. It is more about privilege than about effectiveness." [8]

What we need to do is to look at the point at which people start in education and what progress they make, and then compare the results at the end with the results at the beginning. Research has shown that middle class children will start off better and will gain more and they will come out top of the table. The content and assessment Arrangements must fit together in a coherent way and ensure a measure of common agreed experiences for all children.

Lord Skidelsky, professor of government at the University of Warwick recently objected to the SATs saying teachers were afraid the tests would be used to judge the quality of their teaching , and that ministers had allowed tests to generate paraphernalia.

" That happened because they aimed for Utopian tests that attempted to be diagnostic as well as measure performance." 9

References

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