DOCUMENT RESUME

ED 032 133 PS 002 144

By-Downing, John; Halliwell, Stanley

The i.t.a. Reading Experiment in Britain.

London Univ. (England). Inst. of Education.
Spons Agency-Ford Foundation, New York, N.Y.
Pub Date 30 Apr 64
Note-9p.; Paper presented at the 9th Annual Conference of the International Reading Association, Philadelphia, Pa., April 30, 1964
EDRS Price MF-$0.25 HC-$0.55
Descriptors-Beginning Reading, Comparative Analysis, *Initial Teaching Alphabet, *Longitudinal Studies, *Reading Development, Reading Instruction, Reading Skills, Spelling
Identifiers-Great Britain

The British experiment with the Initial Teaching Alphabet was in its third year at the time of this report on the effectiveness of i.t.a. as a beginning reading program. Two groups of students were compared: one that started learning to read with i.t.a. and one that started with t.o. (traditional orthography). Reading and spelling tests were administered to the groups several times during the 3-year period. The results showed that the beginner's rate of progress was more rapid with i.t.a. due to the reduced volume of learning required. Children in this group, provided with a less complex alphabetic code, showed superior ability in word-building. Pupils who began with i.t.a. achieved superior scores on t.o. tests 18 months later, and when transferred to t.o. read with greater accuracy and comprehension than children who began with t.o. By the middle of the third year i.t.a. pupils could spell as well in t.o. as students who began with this system. Therefore, the acquisition of basic reading skills appears to be accelerated with i.t.a., and transfer of training from i.t.a. to t.o. results in a substantial gain in learning to read traditional orthography. (DR)

# THE i.t.a. READING EXPERIMENT IN BRITAIN

by

John Downing & Stanley Halliwell,
Reading Research Unit, University
of London Institute of Education.

A paper presented at the 9th Annual Conference of
the International Reading Association at Philadelphia
on 30 April 1964

## INTRODUCTION

The British experiment with the Initial Teaching Alphabet (i.t.a.) is now in its third year and since my address to last year's I.R.A. Convention in Florida there have been important developments in the use of i.t.a. in Britain.

In Britain many educators no longer regard i.t.a. as experimental. Quite apart from the 200 schools collaborating with the Reading Research Unit, hundreds of other schools are now adopting i.t.a. as the standard procedure for beginning reading. Although in Britain every principal is free to choose whatever reading program he believes is most effective for his students, already nearly all the schools of two large towns have adopted i.t.a.

This wide adoption of i.t.a. makes even more important the duty of our research unit in London to continue the scientific evaluation of i.t.a., and I am pleased to report that very substantial funds have been given to us to maintain and expand our research and development of i.t.a.(1)

I have elsewhere provided a full description of i.t.a.(2) and in another recent publication I have discussed the history of this approach and related i.t.a.'s main features to teaching methods and children's needs in the learning situation.(3) Today I shall confine myself to presenting an up-to-date report of the results of the British experiments with i.t.a. for beginning reading.



1. The Ford Foundation has granted 100,000 dollars for the current year's work on the development and evaluation of i.t.a. at the Reading Research Unit in the University of London Institute of Education.
2. John Downing. The Initial Teaching Alphabet. New York: Macmillan, 1964.
3. John Downing. The i.t.a. Reading Experiment. London: Evans, 1964.

## THE EXPERIMENT

In the fall of 1960 I was asked to design and conduct experimental research into the effects of augmenting the alphabet in the beginning stages of learning to read. The alphabet chosen for this purpose was the i.t.a. (then known as the "Augmented Roman Alphabet") which was the invention of Sir James Pitman.(1) He proposed that young beginners should use the more simple and more reliable i.t.a. until they became confident and fluent in reading i.t.a. when they should transfer their skill and confidence to reading the traditional orthography (t.o.) of English. Pitman had taken special care to design the i.t.a. characters and the rules for their use in spelling in such a way as to make it easy for children to transfer from i.t.a. to t.o.

To evaluate the effectiveness of i.t.a. for beginning reading we decided to compare the attainments of an experimental group of pupils starting on i.t.a. with the achievements of a matched group using only t.o. from the beginning. We have attempted to hold constant in the two groups all factors except the one critical variable of the alphabet and spelling used in beginning reading and writing. This includes even efforts to match the two groups on the Hawthorne Effect.(2) Thus a difference in the achievements between the i.t.a. group and the t.o. group can be attributed to differences in the orthography.

## RESULTS IN THE FIRST THREE YEARS

It must be emphasized that we still do not consider that our research has reached a point at which final answers can be given to the many questions raised by the use of i.t.a., and we would caution educators not to form definite judgments or final conclusions regarding i.t.a.'s use until the limitations of our present findings have been made good in the investigations planned for the next four years.

The most important limitation of this present report is that it can relate only to that part of the sample recruited during the period September 1961 to September 1962. Thus the sample is relatively small for some of the results in this report, and final and best matching of i.t.a. and t.o. groups is not yet possible. However, we have investigated the composition of the i.t.a. and t.o. groups and have found no significant differences between them in respect of age, sex, social class and intelligence at the outset of the investigations.

---

1. I.J. Pitman. Learning to Read: An Experiment. Journal of the Royal Society of Arts, Vol. 109, pp.149-180, 1961.
2. Full details of the experimental design and the composition of the sample are given in: John Downing, The i.t.a. Reading Experiment. London: Evans 1964.

In this paper attention is focussed on the group which has been under investigation longest in the British i.t.a. experiments. That is the 413 children (and their t.o. control partners) who began to learn to read with i.t.a. in September 1961. We shall indicate also where there is confirmatory data from the three additional groups which began in January (106 pupils), April (143) and September (936) 1962.

## 1. More rapid progress through the reading program in i.t.a. classes

The beginner's load of learning appears to be greatly reduced when i.t.a. is the printed medium of instruction. To read books the i.t.a. pupil needs to learn: (1)

(a) Only one form of character (e.g. b only - not B)

(b) Only one whole-word pattern for each word of English. (e.g. bit only - not Bit and BIT).

(c) Far fewer print symbols for phonemes. (e.g. only one symbol for the oo sound in zoo, shoe, flew, do, through, etc. instead of up to 30 different symbols in t.o.).

This reduction in the volume of learning appears to lead to a very marked increase in the beginner's rate of progress through the basal readers. After only five months the four and five year old beginners in the i.t.a. group using basal readers printed in i.t.a. were significantly ahead of the t.o. group using the same basal reader series printed in t.o.

By the end of the first school year the average i.t.a. pupil was on Book II of the reading program, while the average t.o. pupil was still at Book I of the same program. Half a year later the average i.t.a. child had moved to Book IV while the t.o. boy or girl had got to Book II After two years the position was beyond Book V for the average pupil in the i.t.a. classes as compared with Book III in the classes using t.o. The groups joining our experiments in January, April and September, 1962 appear to be making the same accelerated progress through the reading program. (See Table 1, page 4).

---

1. For detailed discussion of reduction of volume of learning by i.t.a. see p. 72 of John Downing, The i.t.a. Reading Experiment. London: Evans, 1964.

Table 1. Reading Primer reached after 1, 1½ and 2 years. (September, 1961 entrants)

| | i.t.a. Group | | t.o. Group | | Kolmogorov-Smirnov Test of Significance. |
|---|---|---|---|---|---|
| | Median | N | Median | N | |
| After 1 year | Book II | 413 | Book I | 687 | Sig. at .1% level |
| After 1½ years | Book IV | 413 | Book II | 687 | Sig. at .1% level |
| After 2 years | Beyond Book V | 306 | Book III | 610 | Sig. at .1% level |

Thus the relief from the burden of t.o. redundancies appears to permit pupils in i.t.a. classes to get away to a much more rapid start in reading.

## 2. Much improved decoding skill in i.t.a. classes

Recent research by Durrell(1) in the United States and Elkonin(2) in Russia indicates that pre-reading training in phonemic discrimination produces significantly improved progress in beginning reading, and this suggests that we should not forget that English, like Russian, is written in an alphabetic code. Unfortunately for the American or British child the t.o. code for English is extraordinarily complex and inconsistent. I.t.a. appears to provide American and British children with a more consistent or, at least, a less complex code than t.o. in three ways:(3)

(a) i.t.a. is very much more consistent in the way that it signals English phonemes (e.g. i.t.a. does not use the letter o to represent different sounds as t.o. does in do, go, women, gone, one, etc. In i.t.a. these different sounds are appropriately signalled by different print symbols).

1. D.D. Durrell & H.A. Murphy. The Auditory Discrimination Factor in Reading Readiness & Reading Disability. Education. Vol. 73 pp. 556-561, 1953.
2. D.B. Elkonin. The Psychology of Mastering the Elements of Reading, in Eds. B. & J.Simon. Educational Psychology in the U.S.S.R. London: Routledge & Kegan Paul.
3. For detailed discussion of the features of the i.t.a. code see pp. 73-74 of John Downing. The i.t.a. Reading Experiment. London: Evans, 1964.

(b) i.t.a. removes the ambiguity of direction of reading which exists in t.o. (e.g. in t.o. in the word bone the first sound is signalled by the first letter on the left, but the second sound is signalled by letters two plus four and the child must reverse from right to left to read the final sound signalled by letter number three. In i.t.a. the left to right rule of reading is never broken, thus bœn ).

(c) i.t.a. reduces the complexity of the print code for phonemes. (e.g. the two letters oe are used in t.o. to represent a different sound in toe from either of the sounds indicated by o and e separately in got and get. In i.t.a. a special character is used for this sound always - thus œ in tœ and o and e are reserved for their own particular sounds).

This attempt to make i.t.a. a more reliable code for young English-speaking beginners in reading seems to have produced the most dramatic results in the British research into i.t.a. Pupils in the i.t.a. group have demonstrated great superiority in word-building. For instance, on the Schonell(1) graded word reading test, the average child in the pioneer group of i.t.a. experimental classes which had been set up in September 1961 could, in the following July (1962), read 19 test words or more on the i.t.a. version of the test, whereas the average t.o. pupil could read only 5 test words on the same test in t.o. Half a year later the average scores were 37 test words read correctly in the i.t.a. group and 11 in the t.o. group. Results from the twelve hundred 1962 entrants to the i.t.a. group have provided confirmation of this finding.

Table 2. Decoding Results after 1 and 1½ years
(September, 1961 entrants)
Schonell Graded Word Reading Test

| | i.t.a. Group | | | t.o. Group | | | Kolmogorov-Smirnov Test of Significance |
|---|---|---|---|---|---|---|---|
| | $\bar{X}$ | S.D. | N | $\bar{X}$ | S.D. | N | |
| After 1 year | 18.8 | 20.7 | 345 | 5.2 | 6.6 | 623 | Sig. at 0.1% level |
| After 1½ years | 37.1 | 20.7 | 345 | 10.9 | 10.6 | 623 | Sig. at 0.1% level |

The greater regularity of the character to sound relationship in the i.t.a. thus appears to produce superior

1. F. Schonell. Diagnostic and Attainment Testing. Edinburgh: Oliver and Boyd, 1950.

attainment in decoding printed English into speech. Other tests have shown that the superiority of the i.t.a. group is not confined to decoding. As we reported last year(1) the i.t.a. pupils are also significantly advanced in comprehension, accuracy in sentence reading and in speed of reading.

## 3. Superior reading after the transfer from i.t.a. to t.o.

In the schools using i.t.a. each child makes the transfer to reading traditional print when he individually is ready for this step. A very few children have been transferred from reading i.t.a. to reading t.o. after only two or three months, but most appear to reach the necessary fluency in i.t.a. during the second year of schooling.

Fluency in reading i.t.a. is desirable before transfer to t.o. because Pitman's design of the alphabet has preserved in i.t.a. to the greatest extent compatible with the purpose of an easier beginning, those same cues, generally situated in the top half of the line of print, which are employed in fluent reading of t.o. Contextual clues help pupils with that minority of words which do change drastically in appearance. When a high level of fluency in i.t.a. has been achieved the pupil should have the necessary skills of using minimal cues and contextual clues to ensure a smooth transfer.

Eighteen months after beginning with i.t.a. pupils achieve very superior scores on tests printed in t.o. The children who began with i.t.a. and later transferred to t.o. have read the latter with much greater accuracy and comprehension than children who have been learning with t.o. from the beginning.

For instance, a sub-sample of seven carefully matched pairs of i.t.a. and t.o. schools were selected from those who had joined the experiment in September 1961, and their pupils were tested on the Neale Analysis of Reading Ability.(2) After 18 months at school the average i.t.a. pupil scored 23 for accuracy and 8 for comprehension when reading the Neale test in t.o. as compared with scores of 9 and 4 respectively for the child who had been on t.o. from the outset. The i.t.a. pupil reads an average of 34 words in t.o. per minute as compared with 19 words per minute by the average child in the classes where t.o. has been the medium of instruction from the beginning. (This is in spite of the fact that only one half of the pupils in the i.t.a. group had been introduced by their teachers to t.o. books).

---

1. See pp. 74-78 of John Downing. The i.t.a. Reading Experiment. London: Evans, 1964.
2. Marie D. Neale. Neale Analysis of Reading Ability. London: Macmillan, 1963.

Table 3. Transfer Results after 1½ years (September 1961 entrants.)

Neale Analysis of Reading Ability (Form A) - in t.o. for both groups.

| | i.t.a. Group | | | t.o. Group | | | Kolmogorov-Smirnov Test of Significance. |
|---|---|---|---|---|---|---|---|
| | $\bar{X}$ | S.D. | N | $\bar{X}$ | S.D. | N | |
| Reading Rate | 33.9 | 24.2 | 146 | 18.7 | 18.9 | 190 | Sig. at 5% level |
| Reading Accuracy | 22.9 | 17.4 | 146 | 9.3 | 11.9 | 190 | Sig. at 0.1% level |
| Reading Comprehension | 7.9 | 6.1 | 146 | 3.5 | 4.4 | 190 | Sig. at 0.1% level |

A later test of these children has provided further confirmation that i.t.a. beginners read t.o. with significant superiority. In the middle of the third year of schooling we tested the i.t.a. children (chronological age 7.1 years) on the standard t.o. version of the Schonell test. The average score for the i.t.a. group (including some pupils who were still on i.t.a. readers) was 34.4 test words in t.o. - the standard for age 8.4 years. The t.o. group's average score was 24.1 - the standard for age 7.4 years.

Table 4. Transfer Results after 2 years (September, 1961 entrants)

Schonell Graded Word Reading Test in t.o. for both groups

| | i.t.a. Group | t.o. Group |
|---|---|---|
| $\bar{X}$ | 33.9 | 24.2 |
| S.D. | 21.4 | 18.1 |
| N | 321 | 583 |

t - test $t = 6.9$ sig. at 1% level

## 4. i.t.a.'s effects on writing and spelling

We have reported previously(1) that creative writing appears to be much improved in i.t.a. classes. Teachers claim that, for instance, "the standard of creative writing has improved almost beyond comparison.". These claims are at present under objective investigation at the Reading Research Unit(2) but already, in her independent study of i.t.a., Southgate(3) has observed that "Free writing in the class appeared more spontaneous, prolific and correctly spelt than is usual with such young children."

Two months ago we administered a t.o. spelling test(4) to both i.t.a. and t.o. groups. At the time of writing not all the answer papers have been returned but Table 5 shows the analysis of the data as yet available.

Table 5. t.o. Spelling test (September, 1961 entrants)
Schonell's Graded Word Spelling Test A

(a) Overall Comparison

| | i.t.a. Group(N=140) | t.o. Group(N=372) |
|---|---|---|
| Mean | 25.8 | 25.9 |
| S.D. | 12.0 | 14.2 |

t = .08
Not sig.

(b) With non-transferred pupils omitted

| | i.t.a. Group(N=110) Pupils Transferred | t.o. Group(N=372 |
|---|---|---|
| Mean | 29.1 | 25.9 |
| S.D. | 11.1 | 14.2 |

t = 2.48
Sig. at 5% level

What is of great interest is that the i.t.a. pupils

1. See pp. 40-42 of John Downing. The i.t.a. Reading Experiment. London: Evans, 1964.
2. Michael Lyon. A Study of Some Samples of Children's Free Writing in i.t.a. and t.o. Unpublished paper
3. Vera Southgate. Augmented Roman Alphabet Experiment. An Outsider's Report. Educational Review, Vol.16, pp. 32-41, 1963.
4. Schonell's Graded Word Spelling Test A in Schonell Diagnostic and Attainment Testing. Edinburgh: Oliver and Boyd, 1950.

can by the middle of their third year of schooling spell in t.o. at least as well as the children who have been reading and writing with t.o. for the whole time.

Perhaps of even greater interest is the fact that when those children in the i.t.a. group who have not yet been fully transferred from i.t.a. to t.o. by their teachers are omitted from this comparison, the i.t.a. group appears to spell in t.o., significantly better than the pupils from the t.o. group. However, these results are incomplete and this difference may be reduced when matched children in the t.o. group are also omitted from the comparison, although one principal reports that after reading and writing cum in i.t.a. and then later being transferred to t.o. and instructed to write come, her i.t.a. children generally do spell this word come, whereas in the t.o. class, where t.o. come has been used from the outset, many of the children persist in writing cum which no one has ever required them to write!

## CONCLUSIONS

In conclusion, although caution must be exercised in respect of the findings of this further interim report, the results of the i.t.a. experiment in Britain provide a further indication that a fruitful line of enquiry has been found.

At this present time, in the third year of the Reading Research Unit's experiment in British Infants' Schools, it does appear that i.t.a., designed as it is for ease of learning at the beginning and ease of transfer to t.o. at the second stage, does accelerate the acquisition of basic reading skills and that this primary training in i.t.a. is transferred to t.o. in such a way that a very substantial saving is gained in learning to read t.o.