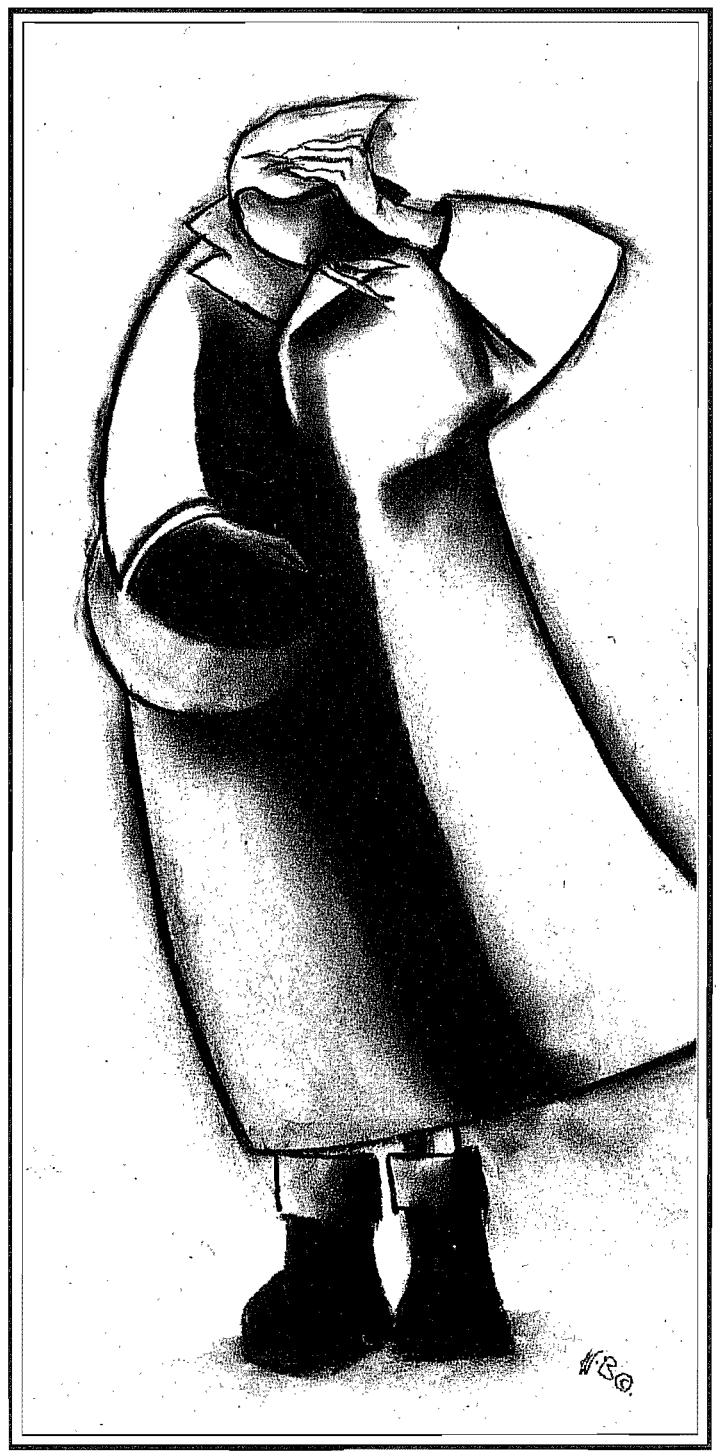
Dyslexia Review

THE JOURNAL OF THE DYSLEXIA INSTITUTE GUILD VOLUME 6 NUMBER 2



AUTUMN 1994

DYSLEXIA REVIEW

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Editorial

It is always fascinating to hear how a well-known person arrived at their present position, and especially how they started along their particular road. In the field of specific learning difficulties, there are people whose depth of dedication and expertise is such that it is difficult to imagine that there ever was a time before dyslexia entered their lives. For Dr. Steve Chinn, the subject of the PROFILE article, the introduction came via a person already working in the field. I imagine that this is the case for many people.

For those of us who have any degree of specialist knowledge, it is important occasionally to think back to a time when we first encountered dyslexia. What now seems so obvious and sensible was then nothing of the sort. If we forget what it was like not to understand, we will fail to communicate effectively with those who have yet to understand, to the detriment of our pupils.

The two major articles in this issue will be of particular interest to those working with top junior and secondary age pupils. The link between them is their relevance to the demands of public examinations on dyslexics, particularly in the area of speed of processing. The research summary on phonological skills and literacy has been held over until the next issue to make room for a very important study of the effectiveness of Dyslexia Institute teaching methods. It is in fact the first time such a paper has been published by Dyslexia Institute staff. For teachers and psychologists who have been convinced of the efficiency of a structured, multisensory literacy programme on the evidence of individuals they have taught, it is exciting to have more objective supporting evidence.

We find ourselves still in a time of educational change, following the publication of the Dearing Report and later the Code of Practice and the revised Parents' Charter. July saw the appointment of a new Secretary for Education and in this issue Liz Brooks summarises the effects of the 1993 Education Act on pupils with specific learning difficulties. One can only hope that a period of stability and consolidation will soon be upon us.

Contents

DYSLEXIA REVIEW is published three times each year by The Dyslexia Institute, 133 Gresham Road, Staines, Middlesex, TW18 2AJ. Telephone: 01784 463851. The Dyslexia Institute is a nationwide organisation offering advice, assessment and teaching to dyslexic people, post-graduate teacher training, short courses and publications on specific learning difficulties (dyslexia).

Dyslexia Review is designed and produced entirely by Dyslexia Institute staff

Cover Picture: Mackenzie Thorpe's *Winter Shopper* reproduced by kind permission.

A Study of the Basic Number Fact Skills of Children from Specialist Dyslexic and Normal Schools

STEVE CHINN

This investigation looks at the performance of children aged 11 to 13 years from mainstream and specialist dyslexic schools when answering basic number fact (addition and times table) questions presented at four second and 12 second intervals. The possible consequences of speed of access to and accuracy of basic fact knowledge are considered.

This investigation was designed as the first part of a study to consider some of the differences and similarities in performances in numerical tasks of children from specialist dyslexia schools and children from mainstream schools. In this preliminary study knowledge of basic facts was compared to give some indication as to the extent of any differences. Facts were presented at two different time intervals to compare the number of facts available at instant recall with the number available if time is allowed to invoke a compensatory strategy. The scores for the two time intervals for addition and multiplication are compared.

Pritchard *et al's* (1987) investigation of dyslexia and knowledge of basic number facts found that dyslexics knowledge of times table facts on an instant recall task was significantly lower than for controls. So, for example, out of a total score of 225, for the 6 times table, the fifteen dyslexic subjects scored 73 to controls 130. This discrepancy would seem reasonable to the author on the basis of thirteen years classroom experience of teaching mathematics to dyslexics. What Pritchard's study did not consider was what effect, if any, extra time would make to these scores. Extra time would allow subjects the chance to use strategies, which may include counting or extensions of known facts, for example 8 + 7 is computed via 2 x 7 plus 1.

Some facts, for example, 8 x 7 would be hard to work out by a counting strategy. It was speculated that dyslexics should be able to count quickly (and accurately) enough to score well on addition facts presented at twelve second intervals. It was further speculated that this would be less apparent for times table facts (with the possible exception of 2x and 5x).

One of the issues for dyslexic students is the allocation of extra time for examinations. Although the anecdotal evidence would seem to suggest strongly that extra time would be a valid provision, some concrete evidence of the effect of a time factor may clarify the situation. The basic fact experiment provides the first evidence.

SUBJECTS

Subjects were selected on the basis of the school they attended, rather than by individual diagnosis. Thus the conjecture was that the students from specialist schools (including some Department of Education Section 11 schools) would have to be significantly dyslexic to be in need of such high level provision, and would have received substantial remedial input. The extent of remedial input received would suggest that any remaining differences were firmly embedded. Entry requirements for the schools chosen specified average or above intelligence.

The pupils from mainstream schools were taken from schools across England and Wales. The main specification was that they should be from the upper half of the ability range in each year group.

For this basic fact study pupils from six mainstream and six specialist schools were tested, a total of 89 mainstream pupils and 91 dyslexic pupils. The age range for the study was 11 to 13 years.

THE BASIC FACT STUDY

The subjects were given answer grids on four separate A4 sheets. A tape of 14 basic addition facts read at four second intervals was played. This was followed by a tape of ten times table facts, also at four second intervals. The first two answer sheets were collected. The same facts were then presented on tape at 12 second intervals. The conjecture was that four seconds would allow the dyslexic subjects time to write down their answer, not enough time to count yet enough time not to engender panic. Twelve seconds was considered long enough to employ a reasonably efficient strategy, including counting. These times were trialled in preliminary experiments. A comparison of the two scores and two groups would be possible.

The subjects were also given strategy sheets at the end of the test session. These sheets outlined possible strategies, including counting. Testers explained the strategies and subjects had to mark which strategy, if any, they used. Without individual questioning, these answers can only be a preliminary indicator of the use of strategies and a follow up study is planned.

BASIC FACTS

The fourteen addition facts were:

4 + 5 7 + 9 8 + 6 5 + 5 7 + 9 9 + 8 5 + 6
6 + 7 8 + 9 8 + 7 9 + 6 7 + 8 8 + 5 6 + 5

(Note that 9 + 7 was included twice for strategy consistency checks).

The ten times table facts were;

7 x 2 6 x 4 5 x 8 7 x 9 6 x 8
7 x 5 7 x 7 6 x 6 3 x 8 4 x 9

Results

The scores for each age group and for the whole sample are given below.

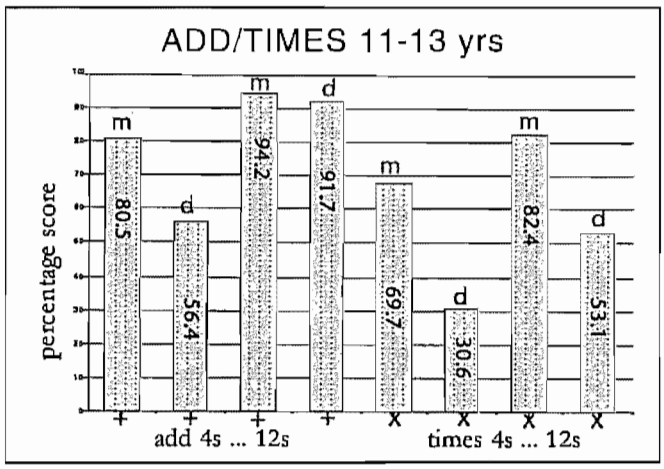
ADDITION (14)	DYSLEXIC		MAINSTREAM	
	4s	12s	4s	12s
11	10.0	13.6	10.8	13.3
12	6.7	12.6	12.9	13.8
13	8.0	13.1	13.8	14.0
all	7.8	12.8	12.4	13.7

TIMES TABLE (10)	DYSLEXIC		MAINSTREAM	
	4s	12s	4s	12s
11	3.9	6.5	5.3	6.3
12	2.4	4.4	7.7	9.0
13	3.3	5.7	9.6	9.9
all	3.1	5.3	7.6	8.5

The data for the combined ages shows that the extra time for addition facts allows the pupils from specialist schools to achieve scores close to their mainstream peers. The bar chart shows that the percentage scores from the two groups at twelve seconds are very similar. However, twelve seconds is a long time if it is needed for every fact in, say, a three digit plus three digit addition sum.

The times table fact scores are lower than the addition fact scores for both groups. This is best shown in the bar chart. In the twelve second scores the pupils from specialist schools are still very substantially below their mainstream peers, and scoring at only just above 50%.

It is interesting to note that at 11 years the dyslexic pupils compare far more favourably with their mainstream peers. One possible explanation for this could be that greater emphasis is placed on mastering this skill at a younger age and that at older ages there is less time to devote to this on-going task. Somewhat ominously Buswell and Judd, in a 1925 monograph quote Myers; errors made in the initial stages of a pupil s contact with the various processes tend to become fixed (repeating even after periods of full mastery). Experience suggests that for rote memory tasks such as recall of times table facts constant review is needed.



Those who teach mathematics to dyslexic pupils know how tenuous is their hold on these basic facts.

Use of strategies

Smaller samples were selected for a preliminary investigation of the use of strategies to compensate for or overcome deficits in basic fact knowledge. Again experience of teaching dyslexic pupils has suggested that many make at least some use of strategies. (Watching a group from a specialist school completing a mathematics test recently, it was obvious how much finger counting was taking place). The most basic strategy is counting. This was by far the most common strategy for addition facts (65.1% of the dyslexic pupils used counting for four or more facts).

More sophisticated strategies for addition start with using 10, for example 9 + 7 is added as 10 + 7 then 1 is subtracted to make 16. A strategy which extends into times table facts is to use knowledge of, say, 2 x 8 to calculate 8 + 7, by subtracting 1 from 16.

Strategies for times table facts are more sophisticated again. Nine times facts can be calculated from ten times facts. (The finger method for nine times facts is more of a mnemonic than a strategy). Children tend to extend the two times table in this area too. For example, 4 x 6 is calculated as 2 x 6 x 2. Other possible strategies are based on the 'lots of' interpretation of multiplication. For example, 7 x 8 is calculated by breaking down 7 'lots of' 8 to 5 'lots of' 8 (5 x 8 = 40) and 2 'lots of' 8 (2 x 8 = 16), so that 40 + 16 = 56. In the data below counting is excluded from strategies.

In a sample of 63 dyslexic pupils from three specialist schools, 33 (52.4%) pupils gave some evidence of use of strategies, 13 (20.6%) used strategies for time table facts and four (6.3%) pupils used strategies for six or more of the 24 facts.

In a sample of 46 pupils from mainstream schools, 32 (69.6%) pupils gave some evidence of use of strategies, 20 (43.5%) used strategies for times table facts and 12 (26.1%) used strategies for six or more of the 24 facts.

It is worth noting that only eight (7.3%) of the 109 pupils claimed to have used the finger method for the nine times facts.

Thus it seems from this preliminary study that dyslexics make less use of non-counting strategies than pupils in mainstream, even though the need for them to use strategies is more necessary.

Discussion

The data supports the generally held opinion that dyslexics knowledge of basic number facts is significantly less substantial than for mainstream pupils. Interestingly, given time the dyslexic pupils were able to take their addition scores to a comparable level to those of the mainstream pupils. This would suggest that, in the absence of time pressure, dyslexics should not make significantly more basic addition errors within a calculation than would their mainstream peers.

The low scores for times table facts, both at four second intervals and even at 12 second intervals are significant for the numerical achievements of the dyslexic group. Extra time is not enough to bring scores up above 55%. Counting (as repeated addition) is no longer an effective strategy.

Chinn and Ashcroft (1993) advocate the teaching of strategies for times table facts. If a child forgets the answer to 8 x 6 and counting is not an effective alternative, then he has no other recourse (assuming a calculator is not allowed or not available). An understanding of strategies can provide the method or even a memory hook to enable the pupil to achieve the answer.

ACKNOWLEDGEMENTS

The author would like to thank the schools and teachers who helped so significantly with this study. ❖

Steve Chinn is Principal of Mark College, Somerset

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Written Output and Writing Speeds

JEAN ALSTON

INTRODUCTION

This paper begins with a review of research into writing speeds throughout the 20th Century, presents the author's own philosophy about how written output should be monitored from school entry and considers attempts by psychologists to develop objective criteria for granting special examination arrangements, in the 1990s. Data on written language output is presented in tables and graphs, and an attempt to establish the validity of a twenty minute written output assessment is illustrated. Discussion and conclusions complete the text.

RESEARCH: 1912 TO 1990

Researchers and educationalists have been interested in how fast pupils are able to write, certainly since 1912 and probably earlier.

The principal questions have been :

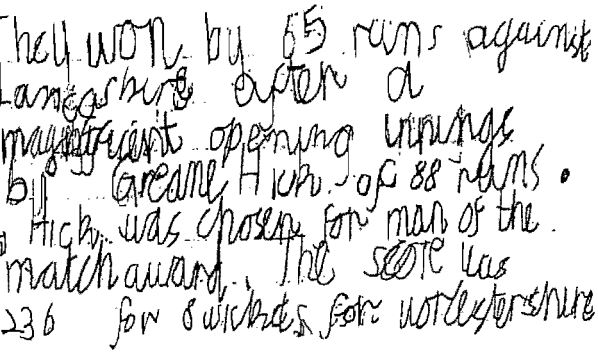
1. How fast are pupils of different ages able to write. Is it possible to develop normative data for writing progress, in the way that we know what to expect with regard to walking, talking, reading and spelling?

Writing Speed

Characteristics Educational Grade	Ayres 1912 IV - VI	Groff 1961 IV, V and VI	Ziviani 1983 III - VII	New Zealand 1980 Year 1 Intermediate	Pickard 1985 Year 1 Secondary
Age Range	9-11	9-11	8-12	11-12	11-12
Number in Sample		4,834	575	3,738	149
Instructions for writing	Read the passage, write it until you are familiar - then copy it	Read the passage, read until you are familiar - then copy it	Write as quickly as possible - do not correct. Write as many times as possible	Write as many times as possible	In writing which can be easily read ... as quickly as possible
Text for writing	First 3 sentences of Lincoln's Gettysburg address	First 3 sentences of Lincoln's Gettysburg address	cats and dogs	The quick brown fox jumps over the lazy dog	The quick brown fox jumps over the lazy dog
Copied or memorised	Copied until familiar with it	Read until familiar with it	Copied	Copied	Copied
Time (per minute)	Two minutes/letters	Two minutes/letters	Two minutes/letters	Three minutes/letters	Three minutes/letters
Norms: Ages					
6					
7					
8			32.60		
9	55	35.06	34.24		
10	64	40.65	38.41		
11	71	49.60	46.18	77	82
12			52.15	77	82
13					
14					

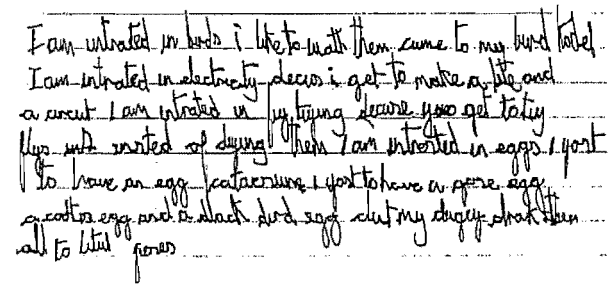
This presents only some of the research that has been conducted

WRITING SAMPLE 1



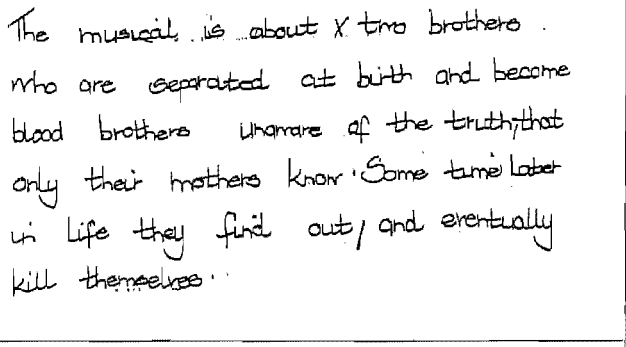
A dyspraxic 9-year-old, who writes 2.75 words per minute

WRITING SAMPLE 2



A dyslexic 10½-year-old who writes 4.4 words per minute.

WRITING SAMPLE 3



A dyslexic 16-year-old, who mastered writing and spelling skills but who writes only 12 words per minute.

2. Which handwriting model, print or cursive script, will help pupils to write more quickly?
3. How do we know whether a particular pupil is able to write quickly enough to have a fair chance in the examinations he or she is attempting?
4. Are there criteria by which pupils who need special consideration/arrangements can be identified?

Dyslexia or Dyspraxia?

Very broadly, there are two groups of children of whom we have become more aware and more concerned about in recent years. They can be divided into two major groups, those with specific reading, writing and spelling difficulties *(the dyslexic)* and those with motor learning problems *(the dsypraxic)*. Some children will be affected by only one of these problems but many dyslexics

Research 1912-1990

Pickard 1985 **Year 1 Secondary**	**Sassoon, Nimmo-Smith, Wing 1986** **Primary and Secondary**	**Mason 1989** **Primary**	**Alston 1990** **Junior, 1, 2, 3 and 4**
11-12	7 yrs 6 m, 9 yrs 6 m, 15 yrs 8 m	6.7 yrs to 8.11 yrs	7.00 to 11.04 yrs
149		146	168
In writing which can be easily read ... as quickly as possible	Write at usual speed (sentences 1 & 2) Write as quickly as possible (sentence 3)	Make a neat copy of the sentence	Write about your favourite person or personality
I love cats and dogs	7-9 yrs. 1. Tom is kicking the ball back to Kate. 2. I think you can take that book in today. 3. Jack and Jill went up the hill. *15 yrs.* 1. David will pass this set of keys back afterwards. 2. The monkeys and giraffes in the zoo need just a little extra food. 3. Jack is running down the hill too quickly.	The quick brown fox jumps over the lazy dog	Pupils' free written work
Copied		Copied	
Three minutes/letters per minute	Time taken to copy the sentence. Sentences 1 & 2 were combined	Time taken to copy one sentence	20 minutes
	'Usual' 'Fast as possible'	Seconds Letters per min	Letters per min Words per min.
		118 18	
	46 55	75 28	
		62 34	14.3 3.75
	64 82		21.5 5.65
			22.6 6.00
97			29.3 7.65
97			
	117 140		

also have motor learning and directionality difficulties. Some dyspraxic pupils also have language processing problems. The two major groups are not mutually exclusive:

- the *dyslexic's* major problem is commonly one of information retention and language processing. For writing assessment, a twenty minute free writing task is probably appropriate.

- the *dyspraxic* will almost inevitably have handwriting difficulties, but may not have problems with retaining information or with language processing. A mechanical writing speed test, perhaps copying a repetitive sentence is probably appropriate.

However, the two types of difficulty go together in some children. As yet, there is no reliable assessment with normative information, for either group.

Cheshire pupils' writing output over a twenty minute period

The Cheshire Junior School data (now Years 3 to 6) (Alston 1990) emanated from a large representative sample of schools and pupils. Seventeen county and two independent schools provided the data. The task was precisely standardised with regard to instructions, paper, timing and other conditions. The intention was to ensure that as many as possible would write for the full twenty minute period; the title 'My Favourite Person/ Personality' proved to satisfy this requirement. All children wrote freely on this topic. Writing rates for pupils in this study are recorded in Table 1 and in Figures 1 to 3.

Research: 1990 - 1994

Research in a Scottish Comprehensive School

Dutton (1990), an Educational Psychologist working in Inverness, examined writing output/speeds in a Scottish Comprehensive School. The study was set to be as close to examination conditions as possible, including a formal presentation, a standard writing paper and a precise time limit. Its limitation lay in the fact that writing samples of only ten girls and ten boys in each year were randomly selected for examination. The situation was as follows:

1. the title was 'My Life History';

2. the writing period was exactly thirty minutes;

3. the teacher briefly introduced the title and topic, giving a few starter ideas, such as place of birth, family, significant life events and interests. (Readers should consult Dutton's original article for teachers' verbatim instructions);

4. pupils were informed that they would also be making a mark after they had written for each three minute period. The teacher simply said 'Time Mark', the pupils made the mark, and proceeded with their writing.

It was concluded that with the exception of Scottish Year 1, pupils are capable of writing at a fairly uniform rate for at least a half hour period, maintaining the rate even in the last three minutes. Writing rates for pupils in this study are recorded in Table 5 and in Figure 4.

Writing from a Guernsey Comprehensive School

Writing output data recorded in Tables 3 and 4 in Figures 5 and 6, and that for the validity study recorded in Figures 8 and 9, were provided by pupils and staff at La Mare De Carteret School, Castel, Guernsey, between September 1993 and March 1994.

Writing from a Cheshire urban comprehensive school

Writing was completed by 97 first year comprehensive school pupils in September 1993. Words per minute for girls, boys, and total pupils are recorded in Table 2 and in Figure 7.

A proposed format for standardised assessment of pupils' written output is presented in the section which follows. This format has been used successfully with pupils aged six and a half to 22 years. It is commended as a means of examining and monitoring writing standards of pupils and students covering a wide age range.

Standardised Assessment of Pupils' Free Writing

Title

Choose one of the following titles:

- My favourite person/personality
- A person I know very well
- Something in which I am very interested.

The titles are chosen to encourage the pupil to write freely about a person or a subject on which he or she has plenty of information. The choice could be a friend, relative, sports or television personality, or even an animal. A group or sports team, or a personal pastime or enthusiasm are equally acceptable.

Instructions

Pupils are asked to write as well and as much as they are able. They should be informed that they will write for twenty minutes and that after twenty minutes they will be instructed to make a cross after the word they are completing. They will then be allowed to continue.

Paper

Writing paper of normal (8mm) line width should be provided. Pupils should write on one side of the paper only.

Pen/pencil

The choice of pen or pencil can be made by the writer; probably the one usually employed in school.

Time

Instruct the writer to mark the paper after the word completed twenty minutes from the beginning, e.g. with a cross or similar. The writer can then be allowed to continue.

Purpose

The purpose of the exercise is to provide a standardised assessment task, somewhat akin to a reading or spelling test, a task completed under standardised conditions.

TABLE 1
Cheshire Primary School Pupils
19 schools. 168 pupils: 86 girls 82 boys
Writing output: 20 minute period

WORDS PER MINUTE

Mean Age:	7:10		8:10		9:10		10:10	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Girls	4.17	2.09	6.15	2.62	6.36	2.46	8.28	3.01
Boys	3.32	1.56	5.14	2.54	5.62	1.92	7.02	3.16
Total	3.76	1.91	5.63	2.61	5.98	2.22	7.64	3.14

(Note: SD = Standard Deviation)

TABLE 2
Cheshire Urban Comprehensive School
97 pupils: 44 girls 53 boys
Writing output: 20 minute period

WORDS PER MINUTE

	Mean Age	Mean wpm	Range wpm
Girls	11 yrs 5 mths	7.83	2.80 - 14.70
Boys	11 yrs 6 mths	6.03	1.65 - 19.00
Total		6.85	1.65 - 19.00

TABLE 3
Guernsey Secondary Modern School
68 pupils: 34 girls 34 boys
Writing output: 20 minute period

WORDS PER MINUTE

	Mean Age	Mean wpm	Range wpm
Girls	15 yrs 11 mths	14.67	2.65 - 27.00
Boys	15 yrs 11 mths	12.93	7.10 - 23.75
Total		13.80	2.65 - 27.00

TABLE 4
Guernsey Secondary Modern School
86 pupils: 40 girls 46 boys
Writing output: 30 minute period

WORDS PER MINUTE

	Mean Age	Mean wpm	S.D.	Range wpm
Girls	11 yrs 6 mths	9.79	3.26	2.63 - 16.07
Boys	11 yrs 6 mths	6.60	2.52	1.43 - 14.00
Total		8.08	3.29	1.43 - 16.07

(Note: SD = Standard Deviation)

TABLE 5
Scottish Secondary Comprehensive School
20 pupils: 10 girls 10 boys
Randomly selected from total school population
Writing output: 30 minutes

WORDS PER MINUTE

Approx. Mean Age	12.7		13.7		14.7		15.7		16.7	
	Mean	S.D.	Mean	S.D	Mean	S.D.	Mean	S.D.	Mean	S.D.
Girls	14.3	2.45	17.3	2.97	17.3	2.65	18.8	3.43	18.9	2.55
Boys	11.1	2.81	11.4	3.88	14.5	2.84	15.4	2.58	17.9	4.53
Total	12.7	3.08	14.4	4.54	15.9	3.08	17.1	3.48	18.4	3.71

(Note: SD = Standard Deviation)

We are interested in:

1. what the piece tells us about the writer's current performance. This can apply to total written output in words or letters, handwriting, spelling, punctuation, grammatical and composing skills;

2. monitoring progress or otherwise in all these skills over a period of time.

Add the following information to the back of each pupil's paper:

Name, sex, date of birth, left or right handed.

A WRITING OUTPUT VALIDITY STUDY

Can we predict examination writing output from a twenty minute writing sample?

This was a simple study, using fifth year pupils in a Guernsey Secondary Modern School. They had completed 'mock' GCSE examinations in January 1994. In the first week of February 1994 they completed a twenty minute piece of free writing, following the Alston twenty minute exercise, i.e. with a choice of three titles.

GCSE English Paper 2 was used as the examination sample. This seems to be the one in which pupils write for an extended period of time. However, the fact that fifteen minutes comprehension reading time is recommended before the writing begins, made this a very imprecise measure of examination writing. The graphs show the Alston twenty minutes free writing exercise, compared with what was assumed to be the first twenty minutes of writing. The first twenty minute examination writing period was calculated as follows:

1. after one hour of examination time, teachers instructed pupils to put a ring round the word they had just completed;

2. words prior to and including the ringed word were counted;

3. the total word score was multiplied by 20/45. (45 = assumed writing time, after 15 minutes reading time).

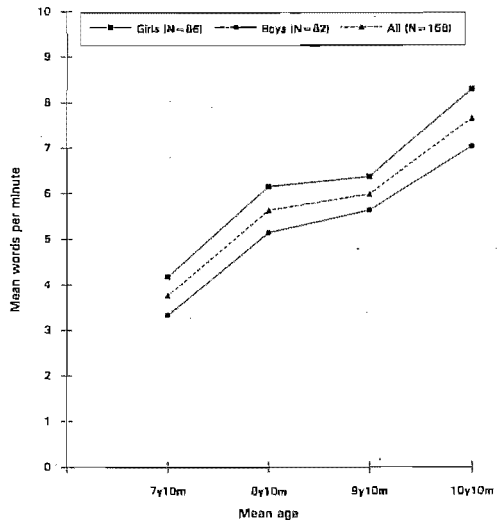


Figure 1: Cheshire Primary School Pupils (19 schools). Writing output over twenty minute period.

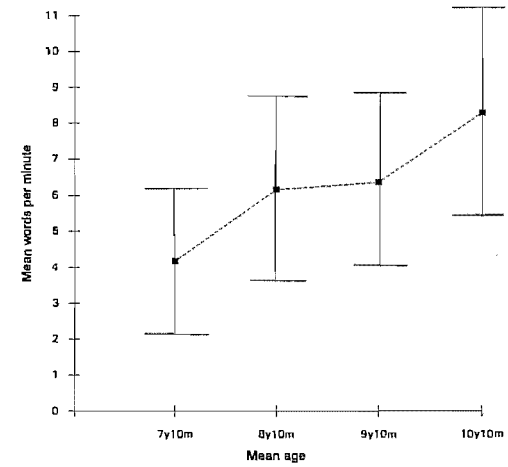


Figure 2: Cheshire Primary Schools girls (N = 86). Writing output over twenty minute period (mean; SD).

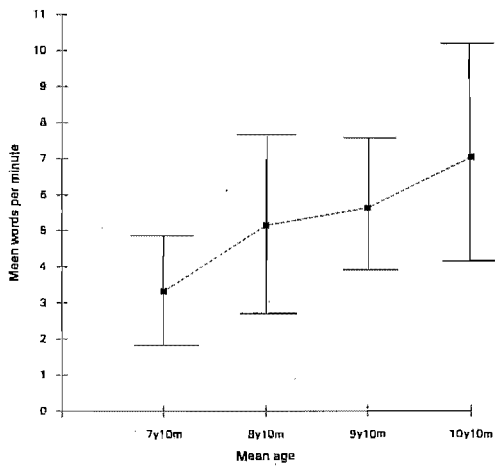


Figure 3: Cheshire Primary Schools boys (N = 82). Writing output over twenty minute period (mean; SD).

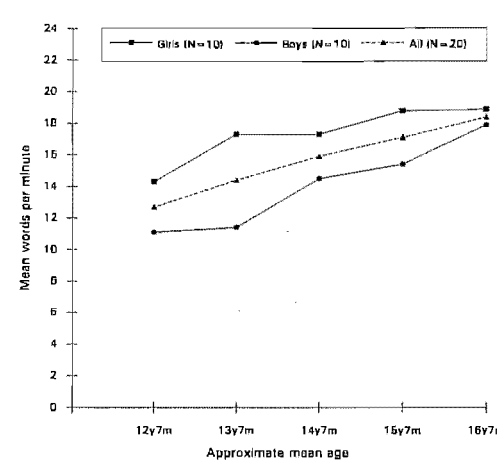


Figure 4: Scottish Secondary Comprehensive School. Writing output over thirty minute period

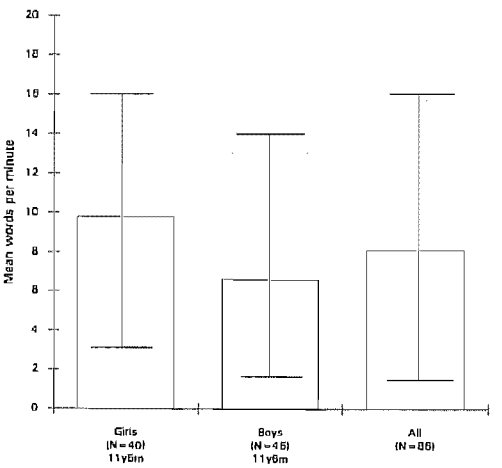


Figure 5: Guernsey Secondary Modern School. Writing output over thirty minute period (mean; range).

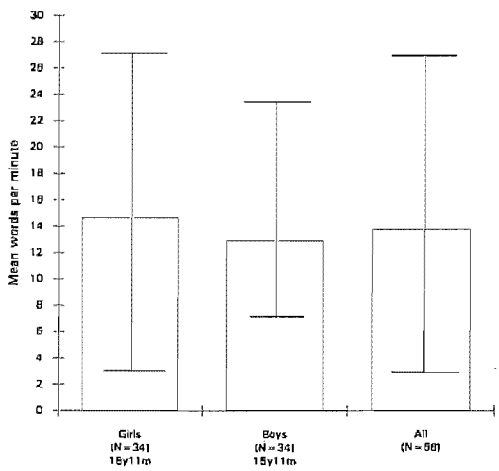


Figure 6: Guernsey Secondary Modern School. Writing output over twenty minute period (mean; range).

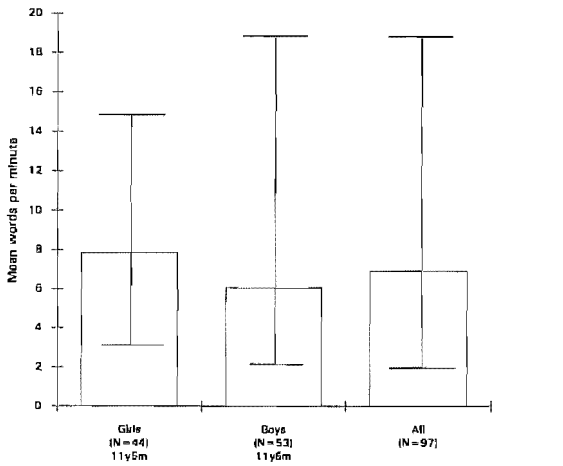


Figure 7: Cheshire Urban Comprehensive School . Writing output over twenty minute period (mean; range).

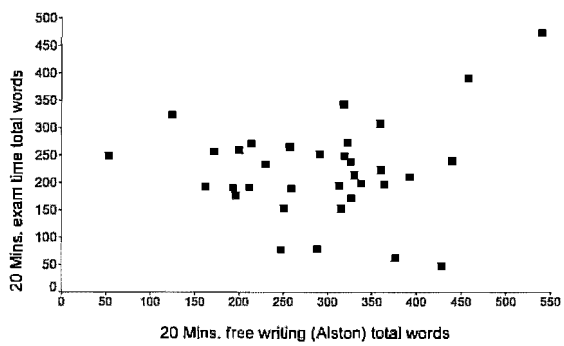


Figure 8: Guernsey Secondary Modern girls (N=34; mean age = 15y 11m)

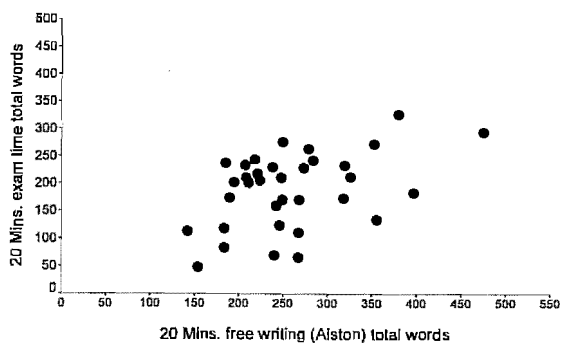


Figure 9: Guernsey Secondary Modern boys (N=34; mean age = 15y 11m)

Figure 8 shows the scatter diagram for girls' writing under the two writing conditions. Little correlation is evident in these data.

Figure 9 shows the scatter diagram for boys' writing under the two writing conditions. My estimate is that Pearson's r, if calculated, would be in the region of $r = 0.4$, $N = 34$; $p = 0.1$ (approximately).

A more precisely controlled validity study, making use of a complete period for extended free writing, for example, a one hour prepared paper, would be of interest.

Examination Board Regulations
Special Arrangements and Special Consideration

There are two documents: *The Effects of Major Categories of Disability on Learning and Assessment* (October 1993), a handbook giving guidance on the main categories of disability and the effects of those disabilities on learning and assessment, and *Guidance for Centres: Special Arrangements and Special Consideration* (October 1993).

These documents can be obtained from: Joint Council for GCSE, 6th Floor, Netherton House, 23/29 Marsh Street, Bristol BS1 4BP. Telephone: 0272 214379

Discussion and Conclusions

The foregoing study was written in an attempt to answer some of the questions currently being asked by examination boards and by educational psychologists. As the number of students requesting special examination arrangements increases, the need for objectivity in the granting of extra time, rest periods, use of a word processor, or similar, is paramount.

Requests for special arrangements were, in earlier years, more often made on behalf of students with physically handicapping conditions. However, greater knowledge about and acceptance of, the difficulties experienced by pupils affected by specific learning difficulties/dyslexia and/or dyspraxia, has led to the search for more objective criteria for examining the characteristics of individual pupils. Establishing general criteria through which individual applications for special arrangements can be examined is a current major requirement. It is evident from these data that pupils in different schools, on average, achieve different levels of written output. The Cheshire primary data is established from a sample of schools representative of the county and, by implication, of England and Wales. In the light of current concern with writing output/speeds for examination students, a representative study conducted in secondary and perhaps higher education is required.

Examination boards have made clear their wish for early recognition of pupils who may need special arrangements for formal examinations. The format for monitoring written output put forward in this study should enable teachers to recognise pupils with special writing needs, early in their educational careers.

The development of information technology, particularly use of word processors of variable potential and mobility, has raised the question of their use for pupils in school and home. It is interesting to note that word processors can be used by any pupil

entering examinations administered by the Scottish Examination Board. The Joint Council for GCSE must be encouraged to adopt this policy as soon as possible.

Pupils' writing can be a rich source of information for teachers and examiners. In this study, a model has been developed for measuring written output in terms of words per minute. However, other characteristics of writing, such as sentence length, word syllable length and perhaps degree and nature of spelling error are also of interest. The present study is just the beginning of an overall plan for assessment through the examination of pupils' written output. ❖

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Staff at 19 Cheshire schools, representative of the county.

Does Dyslexia Institute Teaching Work?

A preliminary report on the reading and spelling gains made by 180 children taught at the Sheffield Dyslexia Institute

JOHN P. RACK AND JEAN WALKER

INTRODUCTION

For 21 years the Dyslexia Institute with its partners has been teaching dyslexic students and training teachers in both private and public sector schools. Numerous past pupils, teachers and parents can testify to the successes of the programme and it is not difficult to find individual examples of pupils who began to make progress with the Dyslexia Institute methods after many years of failing with the 'standard' systems.

However, there has not, until now, been an attempt to analyse the progress records of a substantial sample of students. This is important because although we can point to spectacular successes, we need to know what sort of progress most children make. We also need to analyse possible reasons why some children fail to respond as well as anticipated. Many practitioners, of course, perform such monitoring on an individual basis but there is a need to pool the information to obtain an overall picture. Through this exercise we hope to learn whether there are particular groups of children who benefit most from the Dyslexia Institute methods, and whether some modifications in methods might be necessary to better meet the needs of others.

Especially in today's highly cost-conscious climate, there is an additional need to consider the 'cost-effectiveness' of individualised teaching programmes. The 1981 Education Act placed a responsibility on Education Authorities to use resources efficiently. However, sometimes there is a confusion between efficiency and economy, and a failure to recognise that an investment of resources in 'at risk' children is often less costly in the longer run — in social, educational and emotional as well as financial terms. To answer questions about efficiency, it is essential to quantify progress so that this can be compared with progress obtained under other alternative - more and less expensive - options.

It is, sadly, almost a defining feature of dyslexics that they fail to acquire basic reading and spelling skills at the rate which is expected. It is for this reason that additional teaching from dyslexia specialists is usually sought. The children whose progress we describe in this report met the traditional criteria for dyslexia of difficulties with spelling and/or reading which are not in line with general intellectual abilities (fuller details are given later in this paper). They attended the Dyslexia Institute in Sheffield for specialist teaching for varying lengths of time but typically received six school terms of teaching for one or two hours per week.

Our prime concern is with these children's progress in basic spelling and word reading skills. At the same time, we recognise that remedial programmes should address the child's educational needs more broadly. For example, it is important to work on strategies for improving comprehension, organisation, memory and sequencing skills and special care is needed to rekindle self-confidence and self-esteem when children have experienced repeated failures. However, we agree with those who argue that weaknesses in basic reading and spelling skills are at the root of most of these additional needs. The teaching focus should therefore be on the primary difficulties in reading and spelling, attention only to the secondary difficulties may produce some short-term improvement but there is a strong likelihood that difficulties will resurface in the future.

A large number of important practical and theoretical questions centre on the issue of 'differential response'. Although many children make progress, some do less well and it would be of great value - practically and theoretically - to understand the reasons for this. For example, there are theoretical reasons to suppose that younger children would respond more readily; they are at an age when the curriculum is geared more towards basic skill acquisition and they are less likely to have acquired 'bad habits' of one form or another. There is also a commonly held belief that children of higher general intelligence are likely to be in a position to respond to teaching more readily. In contrast, there is a view, partly supported by data from the Isle of Wight studies, that children with Specific Learning difficulties are more likely to have an underlying weakness or deficit which makes learning particularly difficult for them.

The results which we publish here are from a sample of school-children seen at the Sheffield Dyslexia Institute between 1979 and 1990. The Dyslexia Institute does teach adults and younger children but the present sample reflects the typical demands on teaching resources at that time. The children stayed in the programme for varying lengths of time. Here we compare their scores on reading and spelling tests on leaving the programme with their scores on entry. We are giving a descriptive account of the results at this stage, having no access to 'control' group information. However, the results can usefully be compared with accounts of progress in other settings.

The Teaching Methodology

All the students were taught on an individualised language programme, using structured, multi-sensory methods. In the early 1980s the programme used was Kathleen Hickey's *Language Training Course for Teachers and Learners*. But by the late 1980s this was being adapted and by 1991 the students were following the *Dyslexia Institute Literacy Programme*. In each case, the students were taught on an individual programme, in a small group of two or three students.

The teaching was highly structured, phonic and cumulative. Grapheme-phoneme links were taught for single letters, then digraphs, and later more complex letter-strings and syllables. Word-attack for reading involved phonic decoding, blending sounds into words, segmenting words into syllables, or into base-word and suffix, in order to improve reading accuracy. New letters or letter-groups were taught to the students in a multi-sensory way and they learned to respond to each using visual, auditory and kinaesthetic channels in a synchronised fashion so that the response became automatic. A system of reading and spelling cards ensured that the students were able to practise these responses daily at home or at school and so establish the responses firmly in memory.

As the programmes were cumulative and structured and vocabulary was tightly controlled, only previously-taught letter-patterns were incorporated into the lesson. Most reading in the lessons concentrated on reading and spelling structured words of increasing length and complexity. Students were also exposed to sentences and short passages of prose with controlled language. Students were taught about the structure of words, about commonly-occurring letter-strings and about the 'rules' of spelling.

Practice in word-spelling was given using the Repeat-Spell-Write routine, (elsewhere often referred to as Simultaneous Oral Spelling), in order to improve sequencing, memory and automaticity. Further practice was given from the teacher's dictation, or from a tape recording of the student's own voice.

Each student was introduced to graphemes in a set order, which mirrored the frequency with which the letters occur in the language. But the pace, vocabulary and complexity of concepts would vary according to the needs and skill-level of the particular student. Wooden letters were often used to practise sequencing and alphabetical order, to demonstrate letter patterns, syllable division and word structure.

Cursive handwriting was taught to the students to emphasize the left-right flow of letters in words, and to create a fluent response to common letter-strings. Unstructured reading and free writing was occasionally given, but time constraints often prevented this.

The Sample

A sample of 184 school-age students (age range five years to 16 years) was obtained from the Sheffield Dyslexia Institute. All of these students had been assessed as dyslexic and had been taught at the DI for a minimum of 23 weeks. To keep to manageable numbers, we selected every fifth student from the files, or the nearest file in which the data was complete. Two students had to be excluded during analysis because of data-entry errors and a further was excluded because their problems were exclusively with number skills.

The students had been taught during the period between 1978 - shortly after the Institute in Sheffield opened - and 1991, the majority of them attending in the later 1980s. They attended the Dyslexia Institute for one or two hours a week during the school year.

Measures

All of the children had been given a psychological assessment at the Dyslexia Institute which produces estimates of Verbal IQ, Performance IQ, Full Scale IQ (Wechsler Intelligence Scales for Children Revised), Reading Age and Spelling Age. On the basis of this and other information, the children had been identified as 'dyslexic'.

In most cases children were given the British Abilities Scales test of Word Reading and the Vernon Spelling test on initial assessment. Their progress was subsequently monitored using the Schonell and the Burt Reading and Spelling tests and the Vernon Spelling test. Of course, it would have been preferable for the BAS test to have been re-administered but this test is not available in a teacher-administered format. We are satisfied that this procedure does not bias the results systematically, rather, we feel, it adds 'noise' which is compensated for by the large sample size.

It is important to note that a number of the children defined as dyslexic were not 'obviously' behind in reading although all were behind in spelling. This is not unusual as children with a dyslexic pattern of abilities and difficulties are better able to compensate for difficulties in reading whereas spelling remains a more significant difficulty. For the purposes of data reporting, we therefore looked first at the poor readers and then at the poor spellers (the whole sample).

Measuring Progress

The traditional way of talking about reading and spelling skill is in terms of age equivalents. Therefore, someone with a Reading Age of eight years is scoring at the level of the average eight-year -old. A number of conventions surround the use of Reading Ages, so for example the nine year level is regarded as a 'functional literacy' level sufficient for basic every-day reading. However, there are particular problems with using reading ages to measure progress, especially when children are starting out below the average.

The main problem measuring progress using reading ages is that a 'year's lag' means different things at different ages. So, for example, the 17-year-old who is three years behind with a reading age of 14, does not have the same 'difficulty' as the nine-year-old who is three years behind with a reading age of six. These differences arise from the fact that most children do more learning at certain stages in development. It is generally recognised that the seven to nine Reading age level covers the greatest expansion in vocabulary although six to seven level usually involves the most difficult 'groundwork'.

When we measure progress in years it may mean, for example, that an older dyslexic who makes only a one year gain in reading age may be learning a great deal if that is the stage when normal development is rapid. One year from 8 to 9 may be better improvement than two years from 10 to 12, even if the gains are made in the same period of time

An alternative way of talking about reading and spelling skills is in terms of 'percentiles' whereby a person's score is expressed in terms of their standing within a particular age-group. In this way someone can be described as being in a particular 'grouping' for example 'the average range', 'the bottom ten per cent', 'the top five per cent' and so on. Again, there are conventions about the degree of difficulty which is taken to signify a problem; for example, a 'cut-off' of the second percentile is often used to decide who may get access to some special educational resources.

We had only Age Equivalent data available for our final reading and spelling tests and so we need to interpret these results with care. However, we can obtain a clearer picture by drawing the percentile curves onto the age progress graphs (see later). This allows us to re-express the age scores in terms of centiles and therefore see whether improvement reflects an increase in ability relative to age level.

RESULTS

Poor Readers

The selection procedure used to obtain this sample was deliberately simple. We did not wish to re-examine the original diagnosis of dyslexia for these children, but wanted to make sure that we were looking at the progress of children starting from a 'below average' level. We excluded from the poor reader sample anyone above eight years of age whose reading age was not one year or more behind his/her chronological age. For the children up to eight, we adopted the criterion of a six month lag. This procedure was conservative in that some of the excluded children may well have been behind the level expected for them.

The resulting sample of poor readers contained a total of 145 children and their summary data are shown in the first row of Table 1. Here it can be seen that the children entered teaching at an average age of ten and a half with an average Reading age of just over eight. The children were of average intelligence and their failure to make expected progress therefore constitutes evidence for a specific reading difficulty. As is typical in such samples, boys outnumbered girls by a ratio of almost four to one.

The children remained in teaching for just over two years on average and their reading improved in age terms by more than two and a half years over that time. This can be expressed as an 'improvement ratio' of years improvement in reading over teaching time. For the overall sample of poor readers this improvement ratio is 1.34.

To evaluate this figure, we need to compare it with the rate of progress shown by the children before they joined the teaching programme. We calculated this by awarding everyone a Reading Age of 6 at age 6 and looking at the increase in reading from six over the time up to starting teaching. On the average, this was about two years 'gain' in about four years of time and hence the ratio of 0.57 shown in the table. We were actually being generous here as some of the children had reading ages on entry of less than six years, some children were therefore credited with progress prior to entry which they had not made. However, this was necessary because we were comparing results on different tests, some of which did not give scores below the six-year level.

The change in the rate of progress is particularly impressive, roughly a doubling of the previous rate of progress. The average change in rate was obtained by dividing the improvement ratio during teaching by the improvement ratio prior to teaching. This came out as 2.6 or at a more reasonable 2.2 after (natural log) adjustment for 'spectacular' (exponential) changes which distort the overall picture.

Progress By Age and IQ bands

We have already noted that gains in terms of years can mean different things at different ages. Therefore we divided the

Table One

Age Group	Ability	No.	Girls	Age on Entry	Full Scale IQ	Time in teaching	Read'g age on entry	Read'g Imprv-ment	Imprv-ment ratio	Prev. Imprv-ment Ratio	Spell'g Age on Entry	Spell'g Imprv-ment	Imprv ment Ratio	Prev. Imprv-ment Ratio
		145	37	10.52	103	2.2	8.17	2.709	1.340	0.569	7.63	2.04	1.049	0.478
5-9	Low	10	3	8.28	91.6	1.96	6.36	2.12	1.138	0.392	6.21	1.73	0.938	0.345
	High	22	6	8.00	114.5	2.58	6.87	2.859	1.158	0.619	6.72	2.32	0.975	0.554
9-11	Low	30	7	9.907	98.67	2.52	7.71	2.933	1.233	0.548	7.26	2.16	1.007	0.458
	High	20	5	9.84	111.5	2.26	8.01	2.7	1.280	0.623	7.52	2.2	1.085	0.525
11-13	Low	29	6	11.57	93.59	2.19	8.58	2.855	1.460	0.545	7.95	1.79	0.893	0.450
	High	18	4	11.78	111.6	1.96	9.32	2.917	1.566	0.635	8.47	2.19	1.224	0.513
14-16	Low	8	3	14.04	89.25	1.2	8.83	1.925	1.605	0.422	8.61	1.36	1.183	0.400
	High	8	3	14.06	110.3	1.59	11.36	2.003	1.443	0.691	9.46	1.98	1.486	0.490

children up into four age groups to make sure that this impressive change in rate did not arise from the undue influence of a particular age group on the overall picture. A further question of interest is whether there are any effects of the children's general ability level. We therefore did a mean split at each ability level to give groups of 'more able' and 'less able' children. As can be seen in Table 1, all of the children were at least 'average'.

The results show that all of the children made gains in reading age and our effects are not therefore a result of artifactual 'improvement' at one particular age level. The improvement ratios are also fairly consistent, although there is a trend towards higher ratios for older children. However, for the reasons mentioned earlier, we should not interpret this to mean that the older children made better progress.

The 'brighter' children did not seem to respond better than the 'less bright' children, although they left with higher scores, they also came in with higher scores. This is quite an encouraging result which suggests that, within the range of children in our sample, all ability levels benefit from the teaching input.

Figure 1 shows the improvements for the eight groups of children whose results are shown in Table 1. The progress in reading is represented for each group by a single line covering the period of time in teaching. A 'tail' has been added to the beginning of each line to illustrate the rate of progress made prior to teaching. By connecting up these 'tails' we can see that the children who we saw at ten are on the projected developmental path of the children seen at age eight. This means that we can be fairly confident that the children in each of the eight groups have similar levels of difficulty. Some bias would be quite possible, for example that the more severely affected children are picked up earlier, but this did not appear to be the case.

For the reasons mentioned earlier, it is useful to look at children's progress in terms of centile scores. Approximate centile lines have been drawn on Figure 1 (using the normative data from the Wechsler Oral Reading Dimension Basic Reading Test). The 50th centile line is the 'normal' rate of progress reflected in the one year of Reading Age per year rate of development. However, it can also be argued that children on the 25th centile are making 'normal' progress. Yet, as can be seen on Figure 1 they are making much less than a year's gain in a year.

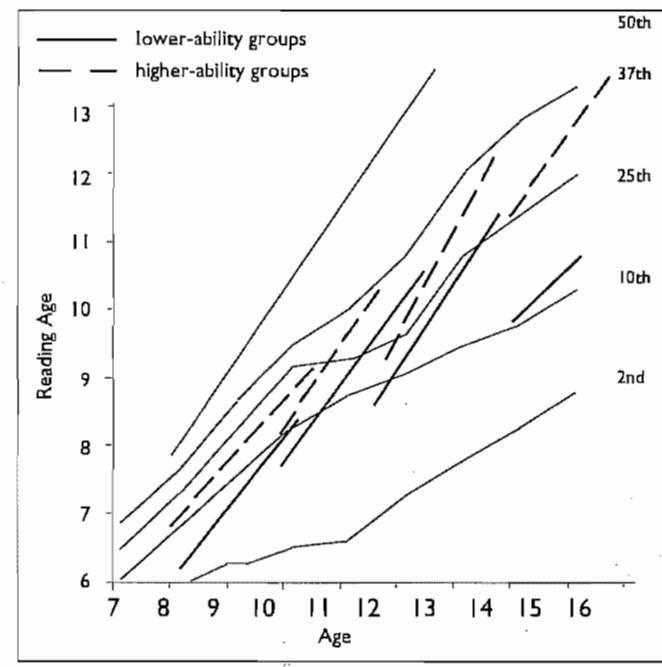

Figure 1: Gains in reading made by lower- and higher-ability children entering teaching around 8, 10, 12 and 14. Approximate centile lines have been added, using standardisation date from the Wechsler Objective Reading Dimension Test of Basic Reading.

The background rate of development shown by our children is keeping them roughly on the tenth centile line reflecting approximately one year's progress in reading over two years in time. This figure is similar to the levels of background improvement ratios which have been reported in previous studies (Thomson, 1991). Clearly, we need to judge the effects of teaching against this background rate of development. Ideally, we would have control groups of children who have not received teaching at the Institute to compare directly with our taught children. For practical and ethical reasons it is difficult to obtain such groups. Knowledge of the background developmental paths does, however, allow teaching effects to be estimated with some confidence.

The lines representing progress during teaching are quite impressive when considered in centile terms. Most of the children make progress which moves them into or close to a

Table Two

Age	Ability	No.	Age	IQ	Time in teaching	Reading age on entry	Spelling Age on Entry	Spelling Improvement Ratio	Spelling Improvement	Improvement on entry
		181	10.5	105	2.13	8.662	7.82	2.02	1.081	0.516
5-9	Low	13	8.352	94	2.23	6.723	6.36	1.71	0.873	0.385
	High	27	7.846	115	2.60	6.923	6.65	2.46	1.017	0.562
9-11	Low	32	9.966	99	2.48	7.894	7.43	2.24	1.096	0.485
	High	32	9.903	114	1.86	9.000	7.99	1.92	1.192	0.615
11-13	Low	32	11.53	94	2.14	8.756	8.04	1.77	0.887	0.468
	High	26	11.72	113	2.03	10.28	8.66	2.22	1.211	0.546
14-16	Low	9	14.32	89	1.2	9.511	8.78	1.40	1.209	0.404
	High	10	13.89	113	1.53	11.800	9.72	1.72	1.284	0.532

centile band which we might consider to be 'normal'. Of course, many of our children are above average in terms of ability and this level still represents a degree of 'underachievement'. However, it means that they have a level of skill which does not single them out from their peers and which should allow them to cope with the material presented at their stage in the curriculum. On average, our children finish up around the 30th centile line. The vertical distance down to the tenth centile line therefore reflects the difference that teaching has made.

Table 1 also shows data for spelling improvement. Here the 'age gains' are more modest but the difference between progress during and prior to teaching is just as large. Rather than discuss these results in great detail, we will consider the results from the overall sample of children which included some people with spelling but not ('obvious') reading difficulties.

Poor Spellers

On the average, this group of children improved from a spelling age of just under eight to just under ten in a little over two years. This is an average improvement ratio of one which is not as impressive as the ratio for reading. However the background rate of progress for spelling is also lower and, in relation to this, the effects of teaching are similar, roughly speaking the rate of progress is doubled.

As for reading, this teaching effect is fairly consistent across age groups. Interestingly, the effect does not seem to be consistently higher for the brighter children as might have been anticipated.

CONCLUSIONS

To the question 'do the DI teaching methods work' we can answer quite simply 'yes'. During teaching, children progress at roughly twice the rate at which they were progressing prior to teaching, and this effect is comparable for spelling and reading. Perhaps rather surprisingly, the benefits are evident for all ages and all abilities, at least within the ranges in our sample.

It may, on first glance, seem rather disappointing that the rate of improvement during teaching does not suggest a complete 'catch-up' to age- (and ability-) appropriate levels, especially in the case of spelling. However, the change in rate of improvement does, typically move the students into an 'average-range' band such that they would no longer be seen as having a significant degree of difficulty. There may, of course, be new situations when this lesser difficulty could be limiting but we can be quite confident in concluding that Dyslexia Institute teaching helps the students over a significant hurdle on their developmental paths.

There are some published accounts of progress made by dyslexic students, most notably by Michael Thomson and his colleagues (as summarised in papers by Thomson (1990, 1994). Improvement ratios for reading have typically been around 1.8 and for spelling around 1.5. The Dyslexia Institute data would seem to compare very favourably with these figures. Direct comparison is, however, problematic as we do not know how comparable the various samples are. In particular, the children attending specialised dyslexic schools are likely to have more profound literacy difficulties and a wider range of secondary and associated difficulties. Nevertheless, these results together, show that dyslexic children do make gains in spelling and reading skills, when they are given appropriate support. Once to two hours per week of input from qualified and expereinced dyslexia teachers seems to make a considerable difference and the cost of this input would seem trivial in relation to the costs associated with continuing failures at school.

This paper presents preliminary descriptive results and there are, of course, many questions still to be addressed. Some analyses are in progress on this sample and results will be made available as soon as possible. Further data is also needed to determine how well the effects of teaching are preserved in the longer term. We would also like to look at some of the wider aspects of literacy skills, study strategies, self-confidence and motivation which may improve in less easily-measured ways. A further project is needed in which we would follow a matched comparison group, who did not receive teaching, and compare their progress with taught students using externally administered tests. ❖

John Rack is a Regional Psychologist and Jean Walker a Training Principal, both at the Dyslexia Institute

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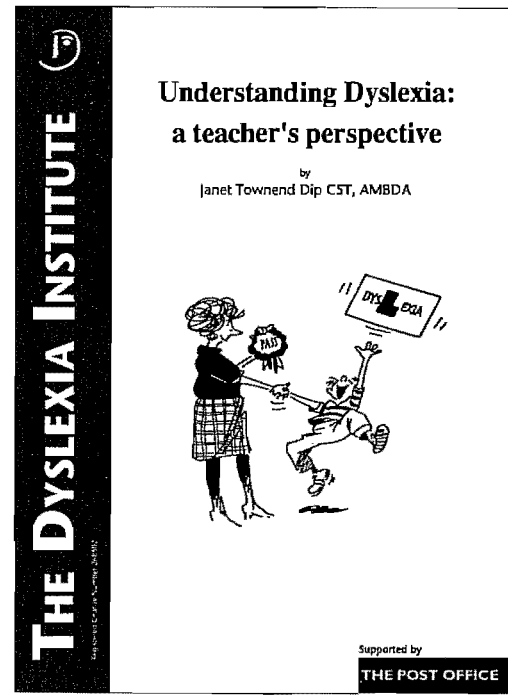
RECENT PUBLICATIONS

Understanding Dyslexia: a teacher's perspective. Booklet by Janet Townend, illustrated by Bill Tidy and supported by The Post Office. An introduction to the difficulties experienced by the dyslexic person, the assessment process and appropriate teaching procedures.

Doing well with Dyslexia by Mary Flecker. A shared exercise with the Dyslexia Institute and the City Technology College Trust. Price £7.50 Written to inform Governors, Headteachers and Special Educational Coordinators of current good practice in dealing with dyslexic pupils in secondary schools.

Available from the Dyslexia Institute



Third International BDA Conference April 1994

MARTIN TURNER

This triennial event must be reckoned the big one in the UK dyslexia calendar. The success of what is only the third such international conference must be credited to Steve Chinn of Mark College and his conference committee.

The international flavour was an important ingredient in this success. Delegates and speakers were encountered from North America, the Scandinavian countries, Israel, Australia, New Zealand and several Middle Eastern countries. As always, the informal social agenda of gossip, exchange and chat more than justified this coming together from distant compass points. But it is on the speakers and their presentations that I shall concentrate in this partial review; partial because, though I tended to select "keynote speakers" or inhabitants of "C16" (the most prestigious venue), or both, for every event I attended there were at least five others involuntarily renounced, so what follows is an account of about 17% of the proceedings. This sort of proportion, features in the very high quality compilation Whurr volume, produced to accompany the conference (Hulme and Snowling, 1994).

Opening ceremonies included BARONESS WARNOCK memorably but incidentally imparting her sense of not being "allowed" to mention dyslexia in her 1978 report, her minders being, of course, DES officials.

DRAKE DUANE, professor at Arizona State University, then opened the academic proceedings. As I had previously read but not listened to Duane, I was interested in his wide-ranging review of studies broadly within the neurobiological tradition which, since Orton, is so important to dyslexia. Though I suspect there was little that was new to everybody, there was much that was new to me. Duane covered neonatal speech perception, phonological training, anatomical anomaly, BEAM (brain electrical activity mapping), cerebral blood-flow, epigenetic (e.g. testosterone) and genetic (chromosome 6) theories, overlap with AD/HD (attention deficit disorder, with and without hyperactivity), even pupillometry (pupil size is a good measure of alertness). Some preliminary findings illustrated a nonverbal learning deficit, though these were from a small sample (N = 10).

DR MARCIA HENRY, president of the Orton Dyslexia Society, next reviewed instructional implications of current research, including her own "metaphonics", a pre-reading phonological training. She then concentrated on teaching principles relevant to the three derivations which account for 94% of English words: Anglo-Saxon, Romance and Greek, across letter-sound correspondences, syllable and morpheme patterns. She allowed more emphasis than is customary to morphemic units and the difficulties dyslexic children have identifying these (prefixes, roots, suffixes).

MARILYN JAGER ADAMS, her lucid chapter safely committed to the conference book, concentrated on audience communication. As someone who works regularly with teachers, she tackled this most successfully, if in unexpected style: "She was most un-academic", commented one teacher afterwards, "She came over as such a nice person", commented a speech and language therapist. Fortunately for me, I had the opportunity subsequently, not only to verify this last statement, but to tell Dr Adams about

the life her very remarkable book has led in this country, influencing, for instance, the revision of the English Order (Adams 1990).

BILL TUNMER, from Massey University, New Zealand, another leading reading researcher, then described Marie Clay's Reading Recovery programme in its natural, New Zealand habitat, where ordinary reading instruction includes "book experience" but no phonics: fully 25% of children have made little or no progress with reading after one year in school, and so qualify for Reading Recovery. He showed a scatterplot of 305 children, of whom none was good at reading exception words while being, as expected, poor at pseudoword decoding (a measure of phonic ability). "Phonological recoding skills," he commented, "are much more important than ability to use sentence context."

Tunmer favours a position ("metacognitive strategy learning") intermediate between atomistic skill-and-drill and wholistic approaches. Strategies include the recognition of "phonograms" (onset/rime units - light/night/bright, analogies by common elements - knew/few), which have been found to improve performance. He referred to his study with Sandra Iversen in Rhode Island in which the addition of some phonics increased the efficiency of Reading Recovery (Iversen and Tunmer, 1993).

DIRK BAKKER chose to emphasize environmental influences - social, nutritional and, in the case of the dyslexic learner, educational. In the case of subjects in his experiments in hemispheric stimulation, this would mean a desirable "rightening" and "leftening", in poor readers of his two types, respectively linguistic or L-type, and perceptual or P-type. Since much of the conference served to emphasize the controversial status of dyslexia subtypes, it is worth mentioning that, in addition to amplitude (EEG) and psychometric (Verbal/Performance discrepancy) evidence, Bakker offered actual literacy behaviour criteria in support of the validity of his subtype specification, namely that P-types were superior in physical and phonological matching, while being slower on semantic and lexical tasks.

Claire Cootes, of the National Hospital College of Speech Sciences, reported on work with two groups of adults, ten dyslexics and ten controls. Certain differences were not found: a verbal coding strategy was common to all subjects, though with dyslexics less so on memory for visual figures; and no regularity effect (reading 'glove', for instance, to rhyme with 'clove') was apparent with dyslexics. However the latter made errors of lexicalization (converting one word to another), hesitation and monotony (dyslexics did not manage to "hold the syntax with their tone"). Dyslexics made more non-phonetic spelling errors. The greatest discriminator, however, was Snowling's list of nonwords for reading (molsmit, tegwop). The typical occupations of successful adult dyslexics were, it was said in response to a question from the audience, engineering and design, computers, non-print media, surgery and architecture.

Max Coltheart, visiting from Macquarie University, Australia, defended his "dual route" theory of reading (the two routes are lexical - directly from print to meaning, and phonological - via letter-sound rules and decoding). Case histories were given to illustrate individuals with a facility in one but not the other, type of reading. He then mentioned a study using 56 dyslexic boys and 56 controls, in which an age effect in nonword reading was apparent. However about 20-25% of dyslexics fell within the normal range on reading of either exception words (pint) or nonwords (zint). His colleague, Ann Castle, has studied a surface dyslexic (IQ 130) who was good at every kind of reading but that of exception words, dealing with 'blood' and 'island' was a "...painful process - word by word".

SUSAN STOTHARD of Newcastle University presented her very interesting study of readers with impaired comprehension. Dr Stothard must have personally administered the Neale Analysis of Reading Ability upwards of 300 times - which must be some kind of record. A prevalence estimate which emerges incidentally from her study of pupils in two York schools is that about 10% of pupils of junior age show comprehension more than 6 months behind accuracy on this test. Phonological processing and general IQ differences were not found to account for the specific difficulty in understanding what was read, this was better explained by verbal and linguistic difficulties that extended beyond reading.

SINE MCDOUGALL of Swansea University had also been active in York schools. She reported a study with Charles Hulme involving 69 children of high, average and low reading ability. From results of diverse phonological testing she concluded that memory span is a good proxy for speech rate, the latter (rate of articulation) is the most important predictor of reading. Measures of phonology made an independent but minor contribution, "Speech rate is a low level phonological measure [and] ... an index of the speed and efficiency with which the phonological codes of words can be activated." From the audience Dorothy Bishop wondered if speech rate were not a measure of a motor skill, and Dick Olson questioned the proportion of error variance and the differential reliabilities of the measures.

ANDY ELLIS of York University described a laboriously planned study of four groups of 13 subjects each, with dyslexics and controls matched on reading age, but with poor and precocious readers comprising the other two groups. But it turned out that the dyslexics were not significantly different on anything! This was evidently a disappointment to Professor Ellis, who was left wondering if a selection bias had included too many remediated dyslexics. Dyslexia, he ventured, was less like measles, a category into which one fell, than obesity, one end of a continuum. Only middle age, he said, had dimmed his enthusiasm for this analogy.

It would not be invidious to claim for VAL MUTER that her presentation was the most beautifully paced and delivered of the conference! (She claimed to have been up at 5.00 a.m. rehearsing it.) Her achievement was all the greater in that she induced in her audience a strong sense of understanding of standardized path coefficients and the oblique rotation of factors in principal components analysis. In following up her 38 four-year-old pre-readers, she found that segmentation, more than rhyming, influences subsequent reading, though rhyming contributes to analogy-use (onset/rime). Phonological awareness continues to make a contribution to spelling.

TIM MILES, in honour of whom an edited Festschrift (Hales, 1994) had been compiled, which was presented during the

conference, compared and criticized two dyslexia prevalence studies: the Yale study (Shaywitz *et al*) and the UK Child Health study, with which Miles had himself assisted during the 1980s. He concluded that poor reading, by itself, may be a good criterion for dyslexia between the ages of five and 12, but that only criteria which included reading and spelling, and other indicators of the kind found in the Bangor Dyslexia Test, produced the usual unequal sex ratio. Converging lines of evidence as to the nature of dyslexia were important in what was a taxonomy issue. In the Yale study we were "buried in the underachievers".

SOLVEIG-ALMA LYSTER had come from the University of Oslo to report on a large training study with 273 monolingual Norwegian children, mostly pre-readers. Using tests of phonology and morphology which she devised herself (and showed us), she demonstrated that groups given either phonological or morphological training ('lykke', happy; 'ulykke', unhappy) had improved in reading within 5 months. Norwegian treats the final -e in 'crocodile' as a fourth syllable: cro-co-dee-luh. The analogy with English is suggestive. Indeed one felt in the presence of a close linguistic relative: the Norwegian for 'pig is 'grees' - compare the archaic English word for a baby pig - 'grice'. It was nice, too, to learn that, whereas 'brambil' means fire engine, 'bilbram' means a car on fire!

INGVAR LUNDBERG, from Umea University, Sweden, soon abandoned his planned talk and instead showed numerous slides of paintings from many countries and eras which depicted the act of reading. After much analytic exertion this proved to be delightfully relaxing and one could, after all, read his chapter (more on phonological awareness and training) in the conference book in one's own good time. Lundberg anointed several of the pictures with remarks (to the effect that women were the bearers of literacy, or that men read for competitive advancement) whose casually portentous mode of delivery made them seem significant if orthodox.

DICK OLSON, of the University of Colorado, reported from twin studies in the Colorado Reading Project much higher heritability (0.56) for orthographic ability than was previously the case, this now compares with phonological recoding (0.59) and phonological awareness (0.60). Much lower values, of course, were given for 129 dizygotic than for 183 monozygotic twin pairs. Might there be a common genetic origin for all three sources of difficulty? Bruce Pennington and his team were mentioned as having provisionally found a marker on chromosome 6. There would be a long way to go, however, before the actual gene was found. On remediation, Olson again described his technique of highlighting unknown words on computer screen, with sub-syllabic units vocalized using speech synthesis. Finally, print exposure was found to be an important discriminator between groups high in orthographic ability but low in phonological ability - and vice versa.

RHONA STAINTHORP of Reading University described the effect of context on nonword reading. Were "children teaching themselves to read", she asked, quoting Pring and Snowling. This effect, of context functioning as a "scaffold which enables you to read semi-known words", is greater with poor readers and with less common words.

USHA GOSWAMI of Cambridge University evaluated various training studies and related, once again, her work on the role of analogy in reading. It is the phonological status of the shared spelling unit (TRIM, TRIP), rather than the number of shared letters, that influences the transfer of reading skill.

DOROTHY BISHOP, of the MRC Applied Psychology Unit in Cambridge, spoke about specific language impairment (SLI). The pessimistic view had been that, in the preschool, language impairment was the start of lifelong learning and behavioural problems. With Edmundson, she had found that 13-14%, only, of preschoolers in their prospective study showed general delay. However there was the concept of "illusory recovery", by which "resolved SLI" could be shown to be compatible with poor performance on many measures other than articulation. About 15% of preschool SLI showed later impaired comprehension in reading. Semantic and syntactic skills proved more of a problem for this group than phonology and phonic reading skills. Metaphon, a phonology training package, has proved so successful that it has to be pointed out that it was not intended to benefit all children!

C.K. LEONG, of the University of Saskatchewan, emphasized the importance of morphological learning in literacy. He had learned English in Hong Kong at the age of 12 and relied on a dictionary "day and night". Etymology and derivation had been great aids. Words such as 'tongue' must be learned by a "lexical strategy" when morpho-phonemic spelling patterns are not transparent. Leong described his large-scale study with unselected grades three to five school pupils and strategies for derivational morphology that were revealed using nonwords (Bob likes STAMANICS - he is very STAMANICAL).

NATA GOULANDRIS' paper was given, in the event, by Maggie Snowling and focused on the causes of individual differences in dyslexia. There are views of dyslexia as a unitary phenomenon (Stanovich's core phonological deficit), as consisting in two or more subtypes (Castles and Coltheart) or as showing continuous variation between surface and phonological types (Seymour). 20 dyslexic and 20 IQ and RA matched younger controls were followed for two years. Only four children showed consistent membership at two different times of "phonological" or "surface" groups, as defined by ability to read and spell nonwords and exception words. Most other tests failed to discriminate between the types, however rhyme production proved harder for the phonological type, and they also made many more non-phonetic spelling errors. But though there are stable individual differences between dyslexic children, these are associated with differences in phonological processing skill. The "severity hypothesis" is "the more likely one", therefore, explaining different diagnostic features (surface/phonological) according to the stage of development, teaching received and initial severity of deficit. In severe dyslexia the underlying phonological representations are coarse-grained and "poorly specified", sublexical mappings do not develop normally: these children are described as phonological dyslexics. In mild dyslexia the phonological representations are delayed but adequately specified; sublexical mappings do develop normally: these children are described as surface dyslexics. Any interaction with other, for example visual processing impairments, might enhance the severity of the dyslexia.

Of the Jean Augur Memorial Lecture, given by ALICE KOONTZ, a tutor and tutor trainer from Baltimore, I recall only two things: "Don't criticize your neighbour until you have walked a mile in his moccasins", which seems clear and sensible advice; more obscurely, for the edification of the occasional dyslexic who might have difficulty screwing in lightbulbs, "Righty-tighty, lefty-loosey"!

Much else must remain unrecorded, for instance the presentation by CHRIS SINGLETON of his excellent computer programs for an early detection trial to begin in the autumn. However for those, like me, who missed this, there was a wholly clear set of overheads-as-handouts and a trip to an upper floor enabled one to try out the software for oneself. I particularly enjoyed pressing various regions to make three rabbits reappear! ✣

Martin Turner is head of psychology at The Dyslexia Institute

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Visual and Inventive Thinking Vital Skills for the 21st Century

CHRIS CHASTY

The Mall Galleries, one of the foremost London arts venues, provided a stimulating stage for the Dyslexia Institute's first conference on creativity. This brought together authorities on dyslexia, creativity and business. Set within the first day of the Arts Dyslexia Trust Exhibition, the symposium attracted one hundred participants eager to learn from the key speakers and to exchange ideas in the frequent programme breaks.

Opening the conference, LIZ BROOKS, Executive Director of the Dyslexia Institute, reminded the audience of many notable dyslexics who had shown outstanding creativity. She noted that dyslexia was not just a literacy learning difficulty. The work of the Harvard neurologists, Geschwind, Galaburda and Sherman had established that the neurological inefficiency which characterised dyslexia had a concomitant increase in right hemisphere efficiency. The challenge was to use those skills in the dyslexic student's learning, and to prepare them to meet the demands of a technological future.

THOMAS G. WEST, author of *In the Mind's Eye*, further developed this theme with references to his well-known book. He reviewed the characteristics of dyslexia which gave another dimension to the learner's thought processes and used insights from cases known to him to illustrate creativity in action.

"How brave and ambitious your dyslexia-creativity-business seminar was ... I don't know of any group that has gone as far as you have."
THOMAS G. WEST

DR. HARRY CHASTY reviewed the literature on creativity, pointing out that it was possible to be creative verbally, visually and practically, and that the detailed descriptions of the creative person given by Torrance were very similar to current expectations of dyslexics.

"Innovative - I hope it will be the first of many."
FELICITY PATTERSON - DI TRAINING PRINCIPAL

The following part of the programme rewarded the creative talents of the dyslexic students who were top prize winners in the Dyslexia Institute's 'As I See It' competition. Sir Roger de Grey, past president of the RA, Peter Thompson, on behalf of Vision Charity, Debra Simpson from Smith Corona and Mike Botell of BT, distributed the awards.

After lunch, GEOFF ARMSTRONG, Director-General of the Institute of Personnel Management and DR. GORDON EDGE, Chief Executive of The Generics Group plc, spoke of the challenge of new technology, the rapidly changing employment requirements of business and industry in the 21st Century and the need for visual and inventive thinking skills.

"Particularly well presented ... a different perspective"
MICHAEL NATION - THE DYSLEXIA INSTITUTE

MARTIN TURNER, Head of Psychology at the Dyslexia Institute, described his study of the abilities of a very broadly based group of dyslexics whom he had assessed and indicated that their visual thinking skills did not fall below average.

Artist MACKENZIE THORPE spoke movingly about his own background of traumatic failure in academic subjects caused by his dyslexia. He abandoned his original speech and gave an impassioned account of the hampering effects of his learning difficulties upon his education as an artist and described his late breakthrough to success. His contribution to the symposium was invaluable.

"I see the world differently ... I may not know the word, but I know how a thing looks, feels, tastes, smells."
MACKENZIE THORPE

The concluding Open Forum took the form of a lively debate in which participants on the platform and in the audience exchanged ideas on the nurture of creativity in dyslexics. They were also able to browse through the display of artistic work of such notable dyslexics as Einstein, da Vinci and Rodin.

"The lasting memory is how beautifully it was all arranged ... it did not focus on difficulties ... it was all about success."
Elizabeth Henderson - Head Teacher ✣

Chris Chasty was formerly Educational Services Developmen Manager at the Dyslexia Institute

Games for Phonological Skill Development

JANET TOWNEND

The overwhelming weight of recent scholarship comes down in favour of a phonological deficit model of dyslexia, and it appears that for many pupils the combination of phonological skill training and a structured literacy programme is the appropriate remedial procedure. The drawback of all this is that the development of phonological skills can be slow and difficult, and endless repetition is very demotivating for teacher and pupil. The games described here are offered as an antidote to tedium; furthermore, the competitive element has been found to sharpen perception and improve performance, thus bringing about experience of success.

The game is traditionally the treat at the end of the lesson. My pupils and I play them at any appropriate stage and sometimes have more than one game if the skill being practised is a priority. The golden rule is to leave enough time to complete the game, thoroughly and without rush, if it is being kept to the end. It is a teaching tool and, as such, should be taken seriously.

PHONOLOGICAL SKILLS WHICH MAY BE PRACTISED

- Rhyme - recognition and production
  Segmentation - initial sounds/blends; final sounds/blend; vowel sounds/other medial sounds.
- Auditory discrimination and matching.
- Onset-rime.
- Syllable counting.
- Phoneme deletion.

THE GAMES AND HOW TO PLAY THEM

1. Pelmanism

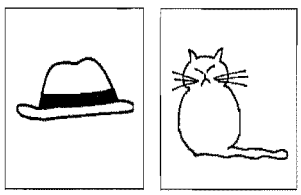
The well-known 'pairs' game : pairs of cards are placed face-down on the table (it is easier if they are arranged in lines) and players take it in turns to turn over two cards. If they match he keeps them, but if not they are turned back. The winner is the player with the largest number of pairs when all cards have been turned.

Phonological skill versions:

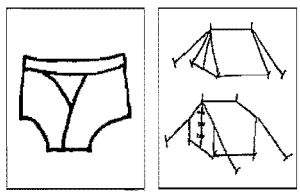
(a) Rhyming pairs (pictures) NB: Do listen carefully and match for sound, not for visual similarity, e.g. *bare* and *wear* rhyme, *bear* and *ear* do not.

(b) Same initial blend; same initial sound; same end sound; same vowel *sound*. (Pictures again).

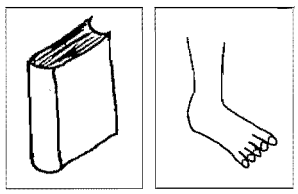
By using pictures, the pupil must say the words aloud to feel and listen for the relationship. If words are used it becomes an exercise in visual matching



cat and hat rhyme



pants and tents end in -nts



book and foot have o͝o

2. Dominoes

The object of the game is to get rid of all dominoes by adding them to a line of dominoes on the table. Each player starts with seven, the others being face-down on the table (the pool). The first domino from the pool is turned up to start, then the first player tries to match one of his dominoes to either end of the domino line on the table. Players continue to take it in turns to add a domino to either end of the line. If a player is unable to play in his turn he takes a domino from the pool.

Phonological skill versions:

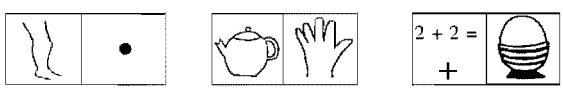
(a) Rhyming pairs (pictures - as above)

(b) Matching sounds (see (b) above)

(c) Onset-rime (using words)

ing	r	ing	s	ink	p	unk	str

(d) Phoneme deletion (pictures). Match the domino to the same word with one sound added or taken away. This one is for quite advanced pupils



(leg) (spot) (pot) (hand) (and) (egg)

3. Diceless board game

Played using any board, e.g. 'snakes and ladders' or a home-made race-game board. Each player places a counter on the first square. Players take it in turn to pick up a card and carry out the task (e.g. rhyming). If successful, he moves his counter by the number marked on the card. (Cards prepared in advance by the teacher).

4. Beetle

Using any beetle game, and prepared tasks on cards, pupils take it in turn to pick a card from the pile and carry out the task. The number on the card signifies which bit of the beetle may be collected (i.e. six for body, five for head, four for each leg, three for eyes, two for antennae, one for tail (do beetles have tails?)

5. Dip-in-the-bag

As above, pupils take it in turn to take a card from a pile and complete tasks written on it. The reward for success is to dip into the bag and take the number of Lego pieces on the card. (The teacher is advised to retain custody of each player's Lego hoard until the end of the game). The winner is the one with the most pieces, but everyone gets the reward of trying to build something with his Lego pieces. (NB. This is more fun if the Lego bag includes wheels, windows, people, etc.)

Phonological skill versions of the three games above.

NB: The pupil picks the card from the pile of hands it to the teacher to read the question - even if he can read it himself - then he is obliged to listen.

a) Rhyme recognition

Which two rhyme - pot cat hot

b) Rhyme production

Think of a word which rhymes with king

c) phoneme substitution

Change the first sound in *bunk* to make part of an elephant

Change the last sound in *pen* to make something used on washing day.

d) segmentation

Which sound do you have first in hand?

Which blend do you hear at the beginning of spin?

Which vowel sound do you hear in skip?

Which sound do you hear at the end of strap?

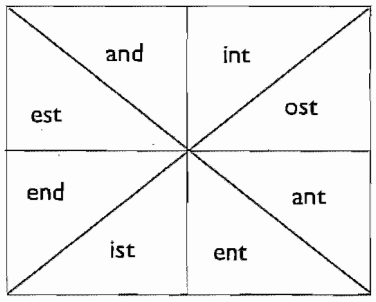
Numbers (1 - 6) may be added to the cards in order of difficulty or at random. I often number by categories, e.g.

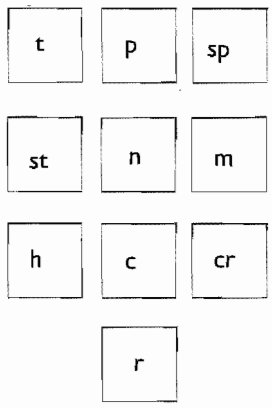
rhyme recognition	1
rhyme production	2
first sound	3
first blend	4
final sound	5
vowel sound	6

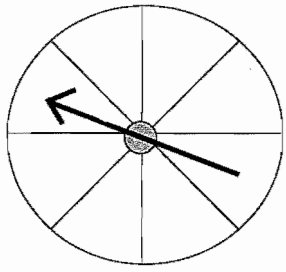
6. Spin-It

You need: plastic spinner (Early Learning Centre or Taskmaster)
Cards, 4" square
Small cards for single letters ($1\frac{1}{2}$" x $1\frac{1}{2}$" approx.)

Aim: to match onset to rime and read words
Example:







How to play: Pupils take it in turns to spin the spinner and pick up a card from the pile (face down on the table). If the onset card makes a word with the rime the spinner points to, the card is kept. If not, it is put on a reject pile which can be shuffled and used again as needed. Winner is the one with the most cards. (Pupil may play alone, write words he makes, and see how many words he can make in five minutes.

There is an enormous number of possible variations on the games described above. They may be adapted for reading or spelling tasks, and other commercially-produced or home-made games may lend themselves to similar treatments. The key factors in phonological games, apart from competition success and enjoyment, are that the pupil should ***listen and repeat*** so he hears and feels the sounds being processed in himself. This slows the games down a bit but without it they are worthless. ❖

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Non-word Decoding Test

MARTIN TURNER

INTRODUCTION

It has been claimed that "nonword reading requires skills that are not needed for word reading" (Campbell and Butterworth, 1985, p. 437), but for most readers, unlike RE, the subject of Campbell and Butterworth's case-study, a non-alphabetic route to reading is scarcely an option. A recent review (Rack *et al*, 1992) argues convincingly that phonological processing is the core deficit in dyslexia. This core of difficulty may interact with other skills and difficulties the dyslexic has (variety may be expected within any group) and be concealed to some extent by effective teaching. Dyslexics may occupy different positions in a continuum of severity (Snowling, 1993), ranging from phonological dyslexia to surface dyslexia.

The use of non-words is well-established as a research tool in dyslexia and is revealing because reading is a "quest for meaning"; an analogy would be experiments into the effects of gravity on the human body which are done in space, in conditions of weightlessness.

An inability to decode non-words highlights the grapheme-phoneme translation difficulties which may lie at the heart of an individual's specific learning difficulties. However, whole-word guessing may also be, in part, the product of the instructional methodology the individual has encountered (Johnston and Thompson, 1989) or the result of a developmental imbalance, with reliance upon visual information outstripping phonological, in the more able child (Johnston, 1993). In any event, a test of non-word reading is an essential source of diagnostic information, with relevance for teaching.

It is perhaps helpful to think of reading progress as covering ground, not laid out by "rules" (the Napoleonic view of written language as a universal legal code), but consisting in "structures" (more a Darwinian view, with species and types). Thus the "-old" structure is usefully grasped as a family: cold, bold, told, fold, sold, gold. The Nonword Decoding test, therefore, establishes the subject's degree of familiarity with the possibilities of written English orthography. This is a matter of mapping morpho-phonemic letter-patterns onto underlying phonological representations. Consider the serial cumulative addition of letters, whose sound, and combinations of sounds, are all known, in the following example:

1. *g* "guh" (vocalized with a 'schwa')
2. *ng* this is familiar as a blend or digraph, common in English
3. *ing* this confirms the common participial ending
4. *ving* this promises to become a word such as "moving" on the same hypothesis
5. *vingt* now we have the French numeral for twenty, a homophone of the word for wine - an utterly different interpretation of the orthography based on the underlying representations of French phonology which differ largely from those of English.

Knowledge of the forms of printed words builds upon experience of phonological; morphemic and syntactic units within spoken English. Naturally, therefore, it is much harder to acquire even an easily pronounced, syllabically regular word in Japanese. Consider, for example, "karoshi", meaning "death from overwork". Since the forms of these sounds are not closely related to familiar English words, the apparatus of phonological memory is less well equipped to learn them.

The non-words in this test avoid, in the main, being either homonyms (but 'poot' = put and 'sode' = sewed) or analogues of real words (but 'hount' is one letter different from 'mount' and 'fount'). Except for the last two, the words are not affixed (e.g. re-present-ation). The order reflects the non-words' empirically established level of difficulty: 'cim' and 'gep' are among the hardest words to read correctly, with their softened initial consonants. (Yet the utility of the soft *c* rule is 96%, as opposed to the soft *g* rule's 64%: Adams, 1990 p. 262). 'Hij' and 'kaphridge' are not like English words (most words beginning *ka-* are imports: 'kaolin' comes from the Chinese) but are unambiguously decodable.

bos op ig et dar

slimp grash blit petrang lenk

pren strilt tef freggy hij

quarn scad poot sost sode

jeal hife hount durl bune

jow liel ipsidom salder toag

cim cardonite sprinderpilling kaphridge

gep phoncher doncenated

dissantomified apprixengilate

ADMINISTRATION

The individual is shown the non-words one line at a time. The test was trialled using the following instructions as standard: "Here are some made-up words. They are not real words, so you

cannot guess them, but you can read them. Try these."

The individual's responses are recorded using some convenient phonetic transcription. Of particular interest is any tendency to *lexicalize* - the conversion of non-word to a real-word near approximation (slimp = slide, poot = pool). The test may be discontinued after 6-10 failures. But as the purpose is not to obtain a score but to probe decoding technique, this is a matter of discretion. For instance, the longer words in the last three lines do not demand significantly more knowledge of grapheme-to-phoneme correspondence rules, but, requiring the individual to construct polysyllabic words *after* assembling the appropriate phonology, challenge memory capacity.

Scoring criteria

To count as correct, responses must accord satisfactorily with pronunciation rules. For the most part the words admit of only one pronunciation, but note certain alternatives:

Non-Word	Preferred Pronunciation	Acceptable Varient
'bos'	boz	boss
'dar'	as in car	
'poot'	as in boot	put
'bune'	boon or byune	
'jow'	as in cow	
'liel'	as in file	as in real
'salder'	as in alder	
'toag'	(one syllable)	
'cim'	sim	
'gep'	jep	

Words sounded letter by letter, but not blended, are not acceptable.

Scoring

The use of the NWDT is primarily clinical or qualitative, that is, to see what decoding technique the individual has. However, based on a small clinical sample (n = 64), the scores correlate r = 0.850 with the Differential Ability Scales test of Word Reading (single word naming). For comparison, this is a very similar relationship to that which may be observed between Word Reading and Spelling (r = 0.852, n = 113). This regression has been used to give some simple "reading age" equivalences, for poor readers only, as follows:

NWDT Score	Reading Age Band
0 - 6	5:1 - 6:10
7 - 12	7:1 - 7:7
13 - 16	7:10 - 8:3
17 - 21	8:9 - 9:9
22 - 24	10:3 - 11:9
>24	>12:0

Interpretation

About 75% of poor readers read nonwords at a level below wha would be predicted, by regression based on the performance c normal readers, on the basis of their word recognition skills (Rack 1989; cited in Rack et al., 1992). If an individual's reading abilit on an acceptable test of single word recognition (BAS, DAS WRAT, WORD) is markedly better than the coding skills apparer on the NWDT, the implication is that the phonological route i relatively weak and has been compensated for, to some extent, b acquisition by sight of whole words.

This pattern of visual or whole-word recognition, in the absence o word attack skills, is characteristic of phonological dyslexia General inaccuracy (omission and addition of letter-elements) is a feature, as is a tendency to impose a whole-word solution, overridin the orthography or pattern of letters on the page. Real wor orthographic neighbours are preferred (ipsidom = imposition salder = soldier).

However almost all proper names, however common, are nonword in this sense (Grundon's of Mortlake), as are many commercia and brand names. Most children will not have read most name before. The absence of a phonological capability in an individual's reading repertoire is the mark of a significant disability. ✣

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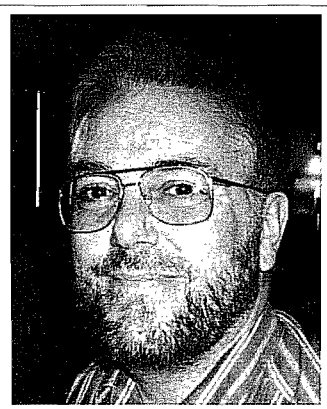


Martin Turner is Head of Psychology at the Dyslexia Institute

Changes in Education, 1994

LIZ BROOKS

1981 EDUCATION ACT

Until the 1993 Education Act became law in the summer of 1993, the 1981 Act governed provision for children with special educational needs (SEN).

On 1st September 1994 the Education (Special Educational Needs) Regulations 1994, made under the Education Act 1993, come into effect and most provisions of the 1981 Act will be repealed.

1993 EDUCATION ACT

IMPORTANT NEW MEASURES FOR CHILDREN WITH SEN

Within Part III of the 1993 Act measures for dealing with SEN were proposed. These included

- shifting the focus towards SEN pupils who do not need statements of special educational needs
- strengthening the system for children who do require statements
- improving the involvement of parents
- enabling education in mainstream schools wherever possible

These principles were to be achieved by:

- introducing a new Code of Practice to which LEAs and schools must have regard
- establishing timetables for, and time limits upon, schools and LEAs in the recognition of and provision for need
- increasing parents' rights of appeal against LEA deadlines and establishing an independent SEN Tribunal to hear those appeals
- working in partnership with voluntary organisations
- requiring every school to have a policy on SEN, which is published in its school brochure and which is reported upon on an annual basis. The first such policy must be published by *every* school by August 1995.

OTHER AREAS ADDRESSED IN THE 1993 EDUCATION ACT

- Extension of the number of grant maintained schools including the ability for special schools to become grant maintained
- creation of the School Curriculum and Assessment Authority (SCAA)
- introduction of measures for dealing with failing schools
- implementation of measures to overcome truancy
- formation of the Funding Agency for Schools through which Grant-Maintained Schools would be funded.

KEY POINTS OF THE CODE OF PRACTICE

It is noticeable that dyslexia is specifically mentioned in the guidelines; the Code is certainly intended to address the needs of dyslexic children - particularly those who have not been statemented in the past.

FUNDAMENTAL PRINCIPLES

- The needs of all SEN pupils must be addressed according to their individual degree of difficulty
- SEN children require the greatest possible access to a broad and balanced education, including the National Curriculum
- whenever possible children with SEN should be educated in the mainstream
- the child may have SEN pre-school which require the intervention of the LEA as well as the health services
- the knowledge, views and experience of parents are vital.

PRACTICES AND PROCEDURES

- All SEN children should be assessed as early and quickly as possible
- provision should be made by the most appropriate agency. In most cases this will be the child's mainstream school working in partnership with the child's parents : no statutory assessment will be necessary
- where needed, LEAs must assess and statement to a time scale, with clear and thorough statements and objectives, provisions to be made, and arrangements for monitoring and review
- the wishes of the child should be taken into account
- there must be close co-operation and a multi-disciplinary approach between all concerned.

ACCOUNTABILITY

School governing bodies must

- do their best to secure necessary provision for any pupil with SEN
- designate the head teacher or a governor to be a 'responsible person' whose duty it is to pass on information from the LEA on individual needs of specific pupils to all who teach that pupil
- increase the understanding of identification and provision for SEN amongst staff
- consult with other bodies when a coordinated approach to SEN may be helpful

- report to parents on SEN every year
- endeavour to integrate SEN pupils into the school as fully as possible
- cooperate with the head teacher in planning and maintaining SEN support in schools; including a training programme for teachers

HEAD TEACHERS ARE RESPONSIBLE FOR

- managing all aspects of the school including planning and delivering SEN support
- working closely with the SENCO
- developing the school policy with the governors and keeping them fully informed

THE SENCO HAS RESPONSIBILITY FOR

- the day-to-day operation of the school's SEN policy and for coordinating provision
- liaising with and advising fellow teachers
- coordinating provision
- maintaining the schools's SEN register and overseeing records
- liaising with parents on SEN
- contributing to the in-service training of staff
- liaising with external SEN agencies including voluntary bodies.

THE RECOMMENDED STAGED MODEL FOR SEN ACTION

SCHOOL RESPONSIBLE

Stage 1: class or subject teachers identify or register a child's SEN, consult the schools's SENCO and take initial action.

Stage 2: the school's SENCO takes lead responsibility for gathering information and for coordinating the child's special educational provision working with the child's teachers. An 'individual education plan' should be drawn up with targets and a review date of perhaps one term.

Stage 3: teachers and the SENCO are supported by specialists from outside the school. Parents may appoint a 'named person' to accompany them to meetings if assessment is recommended.

LEA & SCHOOL SHARE RESPONSIBILITY

Stage 4: the LEA consider the need for a statutory assessment and, if appropriate, make a multidisciplinary assessment. Parents must be informed of 'Named Officers' who can give them more information.

Stage 5: the LEA consider the need for a statement of special educational needs and if appropriate, make a statement and arrange, monitor and review provision. Alternatively a 'note in lieu of a statement' is provided to the school but no additional funding is allocated.

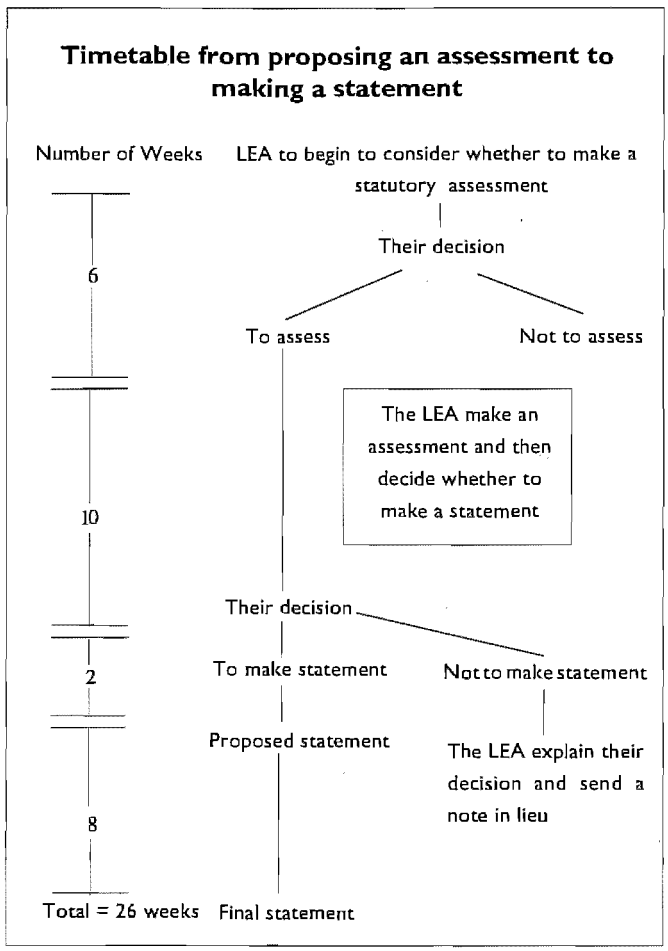
PARENTS

- must always be involved
- can request a statutory assessment from the LEA under Section 172 (2) or 173 (1) of Education Act '93, if the school is not suggesting this route
- can appeal to the SEN Tribunal if the LEA refuse to make a statutory assessment or a statement after assessment, or if they disagree with a statement
- have a right to express a preference for a state school
- may put forward names of independent schools but LEAs have no legal duty to place children in these schools if there is a suitable state school

TIMING AND REVIEW

	STAGE 1	STAGE 2	STAGE 3	STAGES 4 AND 5
SCHOOL	Termly review Options - recommended progress is being made, move to stage 2	Review within a term recommended Options - revert to Stage 1; continue at Stage 2; move to Stage 3 after two unsatisfactory reviews	Can follow stage 2 or Stage 4 may be initiated because all feel that early intensive action is needed. Review within a term	Must take no longer than 26 weeks from the time a request for a statement was made either by - the school - the parents (under section 172 (2) of 173 (3) of Education Act 1993) Statement must be reviewed annually First annual review after 14th birthday a 'Transition Plan' is prepared. ** Statement stops - at 16 if child leaves school - at 19 years if he stays on
PARENTS	Kept informed	Invited to contribute Informed of outcome	Invited to attend review and consulted if statutory assessment is recommended. LEA must be given 29 days for parental agreement.	Parents have 15 days to comment on a proposed statement. Can meet with LEA then have 15 further days for comment ** Parents invited to attend review and have 15 days to agree changes

- are informed about and may take part (with their child) in all reviews from Stage 3 onwards.



SEN Tribunal

From September 1994 the new independent SEN Tribunal will hear appeals from parents who are unhappy with the LEA's decision.

The aim is for these tribunals to be informal and use of lawyers will be discouraged. Legal aid will not be available. It is intended that the appeal should be processed as rapidly as possible and the decision of the Tribunals will be binding on LEAs.

School Attendance

The 1991 School Attendance Act began the process of tightening up on truanting.

The guidelines published by the DFE in May 1994 on policy and practice on categorisation of Absence acknowledges the need for special tuition off-site for dyslexic children and suggests that when the arrangement is agreed by the school that this should be regarded as 'authorised' absence.

Dearing Review of the National Curriculum

The needs of dyslexic children have been acknowledged to some degree by SCAA in its review of the National Curriculum (1994). In the early years more time has been allocated for basic subjects.

This Review will be finalised for implementation in 1995.

SUMMARY

Education Act 1993 is as important as was the 1981 Act - perhaps more so. Its key elements involve every school having a policy, following a Code of Practice, working in collaboration with parents, LEAs, other professional and voluntary bodies for the benefit of SEN pupils. Schools will be monitored by OFSTED and parents will have a right of appeal against LEA decisions to independent Tribunals. The aim is to allocate scarce resources more fairly and to ensure that they are used effectively without recourse to a highly legalised structure.

Let us hope that the renewed commitment given to SEN children can assure improved provision for them all.

Liz Brooks is Executive Director of The Dyslexia Institute

STOP PRESS!

In August, Dr. Albert Galaburda and colleagues at Beth Israel Hospital and Harvard have published the results of a post-mortem study of five brains from dyslexic people and seven from non-dyslexics.

They examined cross-sections of the medial geniculate nucleus (MGN) which is associated with hearing simple sounds. The scientists found that the MGN in the left cerebral hemisphere of the dyslexics have substantially more small neurons and fewer large neurons. In contrast, the non-dyslexics had similar neuron ratios on both sides of the brain. The left cerebral hemisphere is involved in language functions.

Small neurons carry information more slowly than large ones. The implication is that dyslexic people will be slower in their perception of sounds than other people. Galaburda says that if such difficulties are present when spoken language is being acquired, children may never learn the full sound structure of their native language, even if, orally, they will compensate by the use of context

This work supports the research findings of psychologists on both sides of the Atlantic who have found phonological perception deficits in many dyslexic children. A report on phonological research will appear in the next issue of Dyslexia Review.

Janet Townend

PROFILE
Dr. Steve Chinn

Dr. Steve Chinn, Principal of Mark College in Somerset, is best known for his work on mathematics and dyslexia. In an interview with Janet Townend he explained how his career has developed.

Steve Chinn is a modest man; it was not easy to persuade him to own up to his achievements. He graduated in Chemistry and taught in grammar and comprehensive schools for many years. In the late 1970's, while teaching physics, chemistry and maths at a comprehensive school in Somerset, he happened to be living in the village of Burtle, which houses Edington, then a junior school for dyslexic pupils. Through contact with the Head, he was encouraged to apply for the post of head of the projected senior school, and thus made the transition from mainstream to special needs.

He set up the new school and ran it for three years, during which time links were forged with schools in the USA. What must surely be a relatively early conference on dyslexia and secondary-age pupils emerged from the Anglo-American contacts, and was held at the school, which was by this time called Chatwick.

In 1984, the American schools beckoned and Steve spent 18 months as Head of Chautauqua Academy, Baltimore. During this time he did a number of courses in the special education department of Johns Hopkins University and started the first of many research projects. From work in collaboration with Dwight Knox and John Bath at Chautauqua came a Test of Cognitive Style (in which thinkers are placed on a continuum between, at one extreme, the sequential, ordered, plodding "inchworms" and at the other, the more intuitive "grasshoppers"). Many teachers have reason to be grateful for this insight into different learning styles.

Steve's aim at this time was to start a school of his own, and to this end he returned to the United Kingdom at the end of 1985 and opened Mark College, at Highbridge, Somerset, in September 1986.

Mark College is a boarding school for severely dyslexic boys of at least average intellectual ability, between the ages of 11 and 16 years. Of the 80 pupils, approximately half are funded by LEAs. The boys are taught in classes of eight, following a normal curriculum, and parti-cipating in sport (some at county level) and other extra-curriculum activities, such as chess, art and The Duke of Edinburgh's Award Scheme. Art is particularly important; many of the pupils do well in visual/spatial activities and a high proportion of A and B grades in GCSE art are achieved.

During his eight years as Head, Steve Chinn has been a well-known and popular speaker at conferences and INSET days, and has published a number of articles, papers and books. His recent publication (with Richard Ashcroft) "Mathematics for Dyslexics: A Teaching Handbook" was reviewed in the last edition of "Dyslexia Review"

Steve claims to have no time for extra-curriculum activities himself, apart from family life, though he was formerly a marathon runner and enjoys gardening. From September 1994 he has become the Principal of Mark College, while the former deputy head, Chinn's co-author Richard Ashcroft, has become Head. The new arrangements should release Steve from some of the day-today responsibility within the school and enable him to spend more time on research. The dyslexia world looks forward to benefitting from this new-found freedom. ❖

25 YEARS AGO

From *Training Teachers to Teach Reading* by Keith Gardner, Dyslexia Review, 1969

"Many teachers regard their own training as defective in one or more ways. There is little doubt that if one seeks to find out specific areas in which teachers feel inadequate, the teaching of reading is quoted most frequently.

It is unlikely that many teachers in training receive adequate courses in the teaching of reading unless they are training for Infant School work ...

Taking the question of meeting the needs of teachers in training first; it is evident that all student teachers, whether they intend to work in the Primary or Secondary field, should, at least, be made aware of the problems they are likely to meet, and have some initial guidance as to how to deal with these problems.

To translate this objective into practical terms is, however, very difficult. A few lectures will not suffice. Indeed, one cannot become a teacher of reading merely be listening to traditional talk and chalk. What is required is:

(i) A thorough knowledge of both intellectual and language development in children.

(ii) An understanding of the principles of verbal communication.

(iii) An ability to apply this knowledge and understanding to working out how children learn to read.

Clearly, these requirements cannot be met adequately by a short lecture course. Students need to work with children, they need to observe children learning to read, and they need opportunities to discuss the significance of their work and observation. This all takes time, and Colleges of Education are already hard pressed by the purely academic demands of their courses. It is unlikely that a great deal can be done to provide more time for studying the teaching of reading unless new priorities are established."

NETWORK

Letters and professional queries

Dear Editor,
Congratulations. It is good to see the Dyslexia Review back again. Using the original cover picture of the first edition of this format was an excellent link with long term memory.

I was particularly interested in Liz Brooks profile of Wendy Fisher. She writes of her leadership, hard work and vision. So often these characteristics were combined to make an asset of what seemed to the rest of us, a disaster. While we were trying to think of a way to solve one particular problem, she would come up with an idea which not only dealt with the immediate difficulty but opened up a whole new area to expand the work of the DI. It was this practical approach towards fulfilling "the dream" that gained the respect of us all. She inspired us; by example she showed us how to work harder than we ever believed possible and to enjoy doing it. Yes, we had many laughs.

What is thrilling is that Wendy's original plan continues to develop. It is great being a pioneer, but to see the work continuing and expanding with the same effort and dedication is part of that vision and thrilling to watch.

Barbara Foster
Stowmarket, Suffolk

❖❖❖

Dear Editor,
I have recently encountered two pupils whose parents tell me they have been diagnosed dyspraxic. Can you please suggest where I might go for further information on dyspraxia and how it relates to dyslexia?

Jane Thomson
Helston, Cornwall

Editor: Contact The Dyspraxia Trust, P.O. Box 30, Hitchin, Herts. (0462 454986). Monday, Tuesday, Wednesday and Friday 9 - 12, or Denise Brown (0923 239119)

PEOPLE

Dr. Alan Baddeley, of the MRC in Cambridge, has moved to Bristol University.

Dr. Steve Chinn has become Principal of Mark College, Somerset.

Richard Ashcroft has succeeded Dr. Chinn as Head of Mark College.

Congratuations to **Chris Carter** and **Dr. Harry Chasty** who were married in May 1994.

FORTHCOMING EVENTS

SCHOOL BASED ASSESSMENT PROCEDURES FOR TEACHERS
6 week evening course.
7th September, 4th/11th/18th October, 1st/8th November
Uckfield, East Sussex
Application form fromThe Dyslexia Institute, Tonbridge - 01732 352762

OPEN DAY
1st October
The Dyslexia Institute , Provincial House, 69 South Parade
Sutton Coldfield, B72 1QU.

AWARENESS MORNING
Working together in partnership
1st October
School of Learning Support, Tile Hill College, Coventry.
Liz Varnish - 0203 257041 or
Barbara Clarke, The Dyslexia Institute, Coventry 01203 257041.

DYSLEXIA INSTITUTE : AWARENESS WEEK
Theme: *Partnership in Practice*
3rd -8th October 1994
Press Call/Conference 10.30 - 3rd October
Wellcome Foundation, Euston Road, London
3rd October, Evening Reception, Wellcome Foundation.

'DROP-IN SESSION'
Advice for parents, teachers and adult dyslexics.
8th October, 10.30 - 12.30.
The Dyslexia Institute, 113 New Union Street, Coventry, CV1 2NT.
Telephone: 01203 257041.

PARENT/TEACHER SEMINARS
10th - 17th October
The Dyslexia Institute, 2 Wedgwood Villas, Ford Park, Plymouth, PL4 6RH.
Contact: Brenda Hale - 01752 672915

INDEPENDENT SCHOOLS EXHIBITION
Olympia 2, Earls Court, London
Friday 14th - 16th October

SPECIAL NEEDS EXHIBITION
The Business Design Centre, Islington, London
18th - 19th October 9.30 am. to 6.00 pm.

UNIVERSITY OF KENT
One-day courses

1. Confidence in the classroom - 4th, 11th, 25th November
2. Independence through study skills - 17th February '95, 3rd March '95.

Application form from the University - 0732 352316

THE DYSLEXIA INSTITUTE GUILD INAUGURAL SYMPOSIUM
Theme: *Innovations in SpLD/Dyslexia*
Saturday December 3rd. 9.30 a.m. - 4.30 pm.
at The Institute of Child Health,Guilford Street, London WC1N 1EH.
for Guild members. Cost £15 to include lunch
Please contact the Symposium Office 01784 463851 for further information.

POST-GRADUATE DIPLOMA COURSES IN THE TEACHING OF STUDENTS WITH SpLD/DYSLEXIA. (Validated by Kingston University)
September 1994 Courses start in: Bath, Crewe Faculty, Harrogate, Kingston, Sheffield, Tonbridge and Winchester.

January 1995 Courses start in Bedford and London.
February 1995 Course starts at Whitefields, Walthamstow

Individuals or Associations who wish to have information included in this section should send details to The Editor in good time (See 'Notes for Contributors'). No charge will be made.

SPEAKING PERSONALLY...

DYSLEXIA

How can you tell whether someone is Dyslexic; just by looking? and if so what does it look like?

No it is not like Cerabal pose or Down syndrome yet Dyslexia affects 1 in 25 people in Britain and four more times it affects male to females.

Dyslexia is derived from two Greek words. 'Dys' meaning difficulty and 'lexsis' which means words.

A dyslexic person perceives words and letters in a much different way to other people because they 'Cross lateral' in thought. So learning, reading, writing and sometimes maths.

I am dyslexic and I find that I have great difficulties in Spelling and maths. I muddle letters in words and mix words in sentences. But what I want you to know is what it feels like. Dyslexia is like a invisible barrier which you can see your aim or goal through this barrier and to reach it you have to push against it really hard and just as it seems like the barrier is going to give it snaps back and your back at square one once again. So as you can see Dyslexics can become frustrated, angry, have tantrums and sometimes become violent. This itself can also lead to other problems too. Because of the usual slow place, there inconsistency and sometimes shyness then they can be easily picked on by their peers. With such comments as 'Thick, Stupid, Bonehead' and you don't have a brain. So with these remarks a loss of self confidence can occur and they can become even more shy and timid. The sad thing to this is that because they tend to be slow thinkers so they can't defend themselves against these comments. Dyslexia only affects the way you have to learn not intelligence.

But I don't want this Speech to be totally pessimistic. Dyslexics tend to be gifted in Artistic areas such as; in art such as modelling, drawing and invented. They have an ability to 'see' complete tasks before started, are good sportsman with abilities to organise others. And usually very good at problem solving. So with all these qualities many Dyslexics do become Artists, Designers, Architects and have other jobs on display fields and with their good motivation and determination they are bound to succeed.

James White

This is the text of a speech prepared and delivered for the 1993 Hancock Oration Prize at Wycliffe College, Stonehouse, Gloucester. James was then 15 years old. Before the delivery of this speech his difficulties had been unrecognised.

THE DYSLEXIA INSTITUTE GUILD

The DI Guild continues to thrive. Membership has exceeded our original target and the span has broadened from DI staff and DI trained teachers to classroom teachers, special needs teachers, those in charge of special needs in schools and colleges to optometrists and psychologists. Our aim with the Guild is to promote fellowship, communication and exchange of knowledge amongst those involved in the field of dyslexia. From the interest shown in the Guild thus far, it appears to be fulfilling this role.

Our major thrust this year is the Dyslexia Institute Guild Annual Symposium to be held on Saturday 3 December 1994 at the Institute of Child Health, 30 Guilford Street, London WC1N 1EH. The theme of the symposium is to be *Innovations in SpLD/Dyslexia* in response to the wishes expressed by many members that they be kept up to date with developments in research and practice that may both widen their own expertise and improve their provision for dyslexics. There will be an exhibition of books and equipment and these will be the chance for those interested to look at the new DI publications. These include a manual for use with older dyslexics, by Walter Bramley called *Developing Literacy for Study and Work*, a manual for use in developing language skills by Janet Townend and Caroline Borwick called *Developing Spoken Language Skills*, and, two new information booklets. All these are sound, practically based systems that complement a system of teaching that DI believe to be now more comprehensive and flexible than ever.

We have been determined to keep the cost of the sympsium low so that as many of you as possible will be able to join us for the day. Tickets are limited to the first 250 so, if you have not already done so, you are advised to book your place promptly in order to make the most of the opportunity to meet and get to know members from your own area.

Other DI Guild initiatives include the proposed setting-up of Swap Shops in various Institutes around the country whereby it is hoped that members can meet and exchange materials and ideas on a social basis.

One last piece of news concerns the Income Tax Relief in respect of Annual Membership to the Dyslexia Institute Guild. HM Inspector of Taxes has now approved Income Tax Relief in respect of annual membership of the Guild. In his letter he says *"The Guild's name will appear in the next edition of the list of approved bodies which is due for publication early in 1995. Inspectors of Taxes will not receive notification of the Guild's approved status until then. Therefore if members wish to obtain a deduction for their subscriptions before the new list is published, they should explain when contacting their local Tax Inspector that the Guild has only recently been approved and quote the Head Office reference: SAPP/T1644/62/1993/JEM".*

As before, we look forward to hearing your views and suggestions. ✣

Madeleine Mohammed is Guild Secretary and Course Director of a post-graduate Diploma Course

BOOK REVIEWS

Children's Learning Difficulties : A Cognitive Approach

JULIE DOCKRELL AND JOHN MCSHANE
Blackwell 245 pages. Paperback ISBN 0-631-17017-0

This book is the combined work of John McShane, a developmental psychologist and Reader in Psychology at the University of Hertfordshire, and Julie Dockrell, Lecturer in the Department of Social Psychology at The London school of Economics, who also carries out some psychological assessments at The Dyslexia Institute, London. Sadly, John McShane died within two weeks of checking the proofs of the book.

The authors set out to provide a framework of reference within which cognitive profiling and practical intervention should be considered. It encompasses not only specific learning difficulties, but language disorder, specific difficulties with number and mild and moderate learning difficulties. The result is a book which is a source of valuable information for professionals involved with children and adults who require assessment and appropriate intervention.

Clear explanations of categories, terminology, assessment and research methods ensure that the reader is able to understand without the need for another reference text. Those who wish to read further are well served by the research and source references which are given throughout the book. The authors emphasise the essential linking of norm and criterion referenced testing when assessing learning difficulty, the importance of taste analysis and identification and implementation of appropriate, precise and measurable intervention.

This is an informative, clear and well-researched book. It will be welcomed for the attention given to the essential elements of identification, assessment and effective education of students with a range of learning difficulties. Clear chapter headings, overviews and summaries combine with the use of precise, clearly explained terminology making this an informative, accessible reference and educational text book. A book for specialist and non-specialists, the libraries of schools, teaching centres and teacher-training courses. ❖

Eileen McCormack is Southern Regional Principal and co-ordinator of 16+ provision at The Dyslexia Institute.

The Phonic Reference File

GILL COTTERELL, LDA

Gill Cotterell has drawn on her many years of experience in teaching students with specific learning difficulties and in working with teachers to produce a very practical resource complete with diagnostic spelling tests: a photocopyable check list of basic sounds; phonic word lists arranged in alphabetical order; a brief, comprehensive guide and teaching ideas for children or adults.

The introduction and guide stress the importance of a phonic approach to spelling and the dyslexic's need for multisensory learning and over-learning. The graded tests are designed to pin-point weak areas of phonic knowledge and provide a guide to teaching needs. They range from a preliminary test to check the student's understanding of basic sound symbol relationships through four further levels. The tests are easy to administer and the results should be recorded on the student's personal checklist.

The checklist was developed so that patterns of errors can be quickly noted both from the tests and general written work and teaching recorded. It does not imply a hierarchy of work but does suggest two levels of work and should be used for planning lessons to correct mistakes. The first page lists single letters, blends, vowel groups, whole word 'chunks', endings (regular final syllables and simple suffixes) and simple rules and the reverse side has more difficult 'endings', beginning (including prefixes), roots and harder rules.

Over a hundred lists of words provide a basis for teaching. Each list contains useful words of a particular letter pattern in arranged order of phonic difficulty and relevant rules are shown nearby. These words can be used in a formal way to learn and spell and can be woven into silly sentences or games for extra practice.

Here is a practical resource that can be confidently recommended to the non-specialist teacher who wants to improve her students' spelling in a systematic way. Specialist teachers accustomed to the Hickey or Dyslexia Institute letter orders will note some variations but the tests and lists could prove useful, especially for older students needing revision or a boost to spelling power as they approach exams or college. ❖

Tessa Gaffney is a Training Principal at The Dyslexia Institute

Day-to-Day in the Classroom

JOY POLLOCK AND ELISABETH WALLER
Routledge Publishers 171 pages. Paperback ISBN 0-415-11132-3

This book is written by two experienced teachers of dyslexics; easy to read, without the jargon of more technical books. As the title suggests, it is aimed at the non-specialist teacher in the classroom. The authors have included some interesting examples of dyslexic pupils' work and case studies to illustrate the problems these pupils face. The book touches on recognising and testing suspected dyslexic children and then goes on to suggest many multi-sensory activities that may be useful in the classroom, including a range of work on speech and language, literacy skills, sequencing, numeracy and study skills. It is a book that will prove useful to classroom teachers from infant to secondary level who have SpLD pupils in their class.

This book may be of interest to teachers doing their initial training, as an introduction to literacy difficulties. I think some parents of dyslexic children who wish to be better informed about their child's difficulties and would like to have advice on how to help them at home, may also find this book useful.

The book emphasises the need for teachers to encourage praise and to mark constructively. In their conclusion the authors state that dyslexia, instead of being considered a 'learning disability', should be looked at as a 'different learning ability', and suggest teachers and parents treat the dyslexic child accordingly. ❖

Wendy Periera is a Senior Teacher at The Dyslexia Institute.

IN THE SPRING ISSUE ...

JEAN DODDS	*ON SELF-ESTEEM*
VALERIE MUTER	*ON EARLY IDENTIFICATION*
JOHN RACK	*ON PHONOLOGICAL RESEARCH*

Notes for contributors

1. Article headings should appear as follows:
   Title of paper or article;
   Author's name, qualifications, professional status and position currently held.
2. A brief summary of the contents (about 150 words) should be included.
3. Two or three sentences of biographical details about the author would be welcomed.
4. Illustrations including photographs, should be good quality black and white.
5. References should be limited to 10.
6. Articles should be typed with double spacing, or on disk ($5^1/_4$ or $3^1/_2$). If using Word-Perfect, save as usual; for any other, please save as an ASCII file. Specify software used.
7. Copy deadlines. Copy should be received by: (14 February for the Summer issue; 31st May for the Autumn issue; 14th November for the Spring issue.)

Contributions should be addressed to:
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