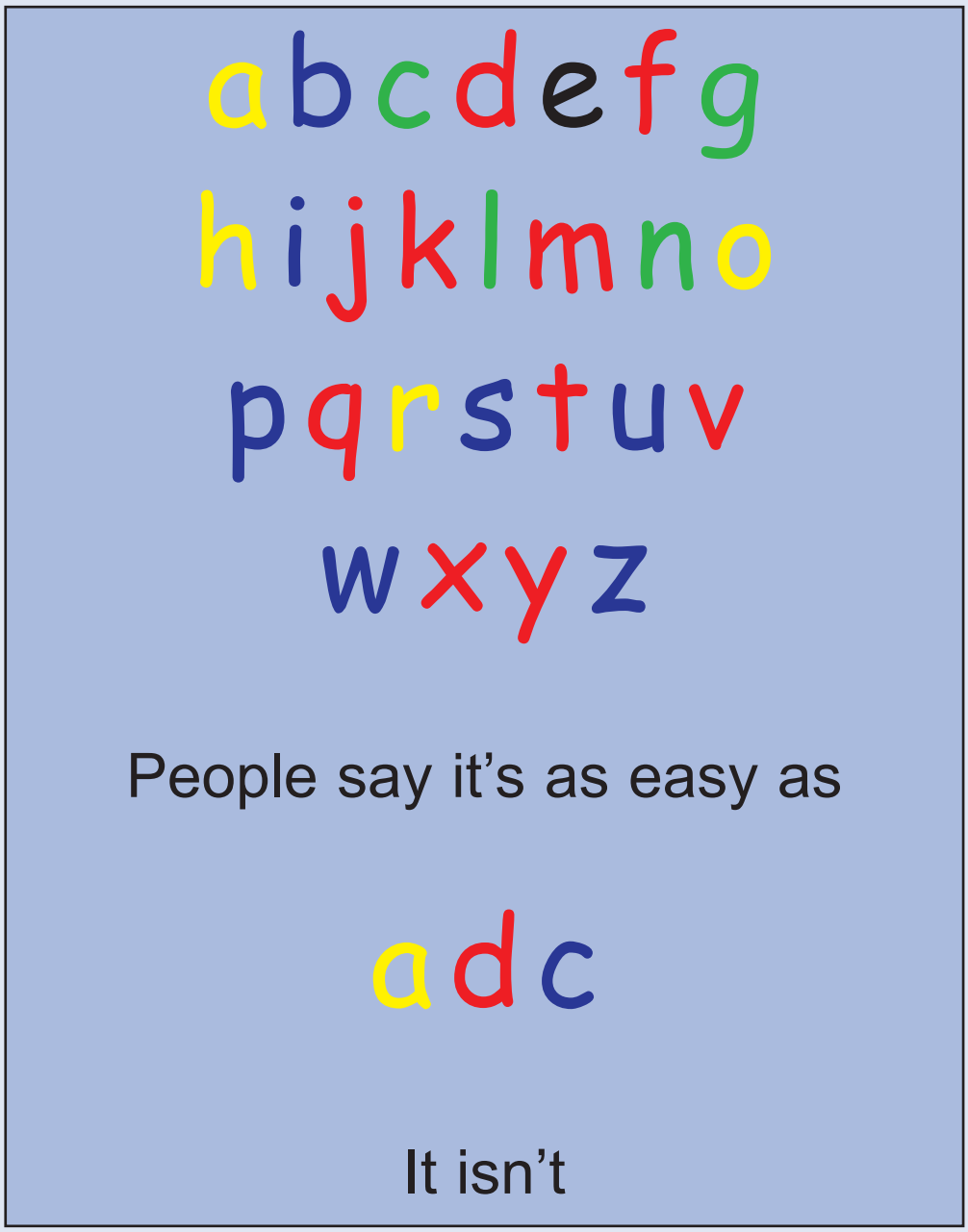
Dyslexia Review

THE JOURNAL OF THE DYSLEXIA INSTITUTE GUILD VOL.16 NO.1



Autumn 2004

DYSLEXIA REVIEW

The Journal of the Dyslexia Institute Guild

Editorial

In this Dyslexia Review we have made a change to the Editorial Committee. Jean Walker has decided to stand down and I would like to thank her for her many contributions to the journal over the years. At the same time I would like to welcome Professor Margaret Snowling who has agreed to join the committee. I am sure you will agree that her knowledge and experience can only enhance the professional qualities of Dyslexia Review.

I loved this story when I heard it and will try to convey the innocence and joy of it to you now. It works best orally – and we only have text, but it's worth a try.

This was as reported by a class teacher who observed her class of five year olds with a visiting drama teacher.

Can you tell me what you know about the great plague of London?

Silence

What do you think it was caused by?

Silence

Getting desperate he resorted to some clues.

The plague was spread by an animal. Does anyone know what animal that was?

I know, I know – a dinosaur.

No, it was a smaller animal.

A tiger, a tiger, a tiger.

No it's a small furry animal – it rhymes with bat.

Mat.

No, it's an animal, a small furry animal. Squirrel.

As you can imagine, by this time the teacher was practically crying with laughter. Every answer was partly right...

Margaret Rooms

Contents

FIFTY YEARS OF DYSLEXIA RESEARCH: A PERSONAL STORY
T R Miles 2

THE IMPACT OF DYSLEXIA ASSESSMENT ON STUDENTS' SELF-ESTEEM AND COPING STRATEGIES
Barbara Riddick 8

SCREENING

The Dyslexia Screener – A Resource for Schools and Colleges
Martin Turner 12

LEARNING STYLES

Widening Opportunity for Dyslexic Learners – Is Learning Style Theory the Answer?
Tilly Mortimore 15

INCLUSION

Inclusion or Choice
Steve Chinn 18

COUNSELLING

Davis Dyslexia Counselling – A Different Approach to Working with People with Dyslexia
Rosemary Savinson 20

TRAINING

Supporting Dyslexic Learners in Different Contexts
CfBT CTAD DI 23

ICT

Units of Sound 4 – NEWS
Margaret Rooms 24

SOFTWARE AND BOOK REVIEWS 25

DYSLEXIA REVIEW is published three times each year by:
THE DYSLEXIA INSTITUTE,
Park House, Wick Road, Egham, Surrey, TW20 0HH Tel: 01784 222 300

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).

THE DYSLEXIA INSTITUTE is a registered charity no. 268502

COVER: *Design by Robbie Burley-Baker (highly commended in the 10-14 Art category of the As I See It Competition 2004).*

Fifty Years of Dyslexia Research: A Personal Story

T R Miles

Note. The article which follows provides a pre-view of a book having the same title to be published by Whurr Publishers in 2005. Enquiries about the book should be addressed to Whurr Publishers, 19b Compton Terrace, London N1 2UN (tel. 020 7359 5979, e-mail mailto:info@whurr.co.uk

Introduction

I saw my first case of dyslexia in the autumn of 1949. I had just come to Bangor as a very junior lecturer and I was asked if I would like to help at the local Child Guidance Clinic. The first case I had to see was a girl aged 10. I have never forgotten the words her headmistress wrote about her:

'Appears very bright and is keen to answer in oral work, but ... she is very slow at any written work... possibly she is a little afraid of making mistakes. Her entire inability to spell is her great weakness.'

There were some very weird spelling errors in her school exercise books. The following are some examples:

whde like to go to (cs) school whte Tome (would like to go to school with Tom)

a large bees of stfe calld a carpet (a large piece of stuff called a carpet)

cooking is den on the sotof (cooking is done on the stove)

he whnet, and his sissder did the whsing (he went, and his sister did the washing)

she ackte (she asked) ofar there (over there)

I knew nothing then about phonological errors or the like, but I could see that her mistakes were interesting ones.

The child psychiatrist in charge of the case told me that he thought that what she was suffering from was a form of aphasia and asked me if I would be prepared to give her spelling lessons. I agreed. She was very shaky over short vowels, and I decided to teach three-letter words with a short vowel in the middle, and I started her off with the five words bag, beg, big, bog, bug. Because she did not have to worry about the b and g she was free to concentrate on the short vowel, and I encouraged her – years before I ever heard of Edith Norrie – to concentrate on the mouth movements which she made as she said the word.

The idea that this was a case of aphasia has influenced all my future thinking. At the time it was fashionable to assume that if a child had reading and spelling problems these were caused by parental anxieties and inappropriate pressures within the family. I became convinced that the reason why this view was wrong was because it was mistaken over the direction of causality. Parental worries – and lack of confidence on the part of the child – were the consequence, not the cause, of the reading and spelling problems: the cause was constitutional in origin and therefore no one's fault. This view was further confirmed when I discovered both from the literature and from my own experience that the same pattern of difficulties regularly ran in families.

The Word-Blind Centre

On the strength of a paper I wrote about my first two cases, I was invited in 1962 to attend a conference at St Bartholemew's Hospital. The convenor was Dr Alfred White Franklin – in my view one of the unsung heroes of the dyslexia movement in Britain. The conference was a stormy one: from the very start disputes about the existence and nature of dyslexia began to surface. For my part I have always felt that many of these disputes arose from misunderstanding and arguments at cross purposes, and I have found that those who are themselves dyslexic, have dyslexic relatives, or are experienced practitioners are pretty well unanimous on essentials. In contrast I have found that it is those without such experience who tell us what a controversial subject it is! As I have sometimes put the matter, those who say that dyslexia is a much misused word are precisely those who misuse it, thus proving themselves right!

After the conference Dr Franklin set up a committee to oversee systematic assessment and research. I felt it was a real privilege when he invited me to serve on that committee. Our headquarters were two caravans placed in a corner of Coram's Fields, north London, and these were used for assessment and teaching as well as for our committee meetings.

It was here where I first encountered Dr Macdonald Critchley, whose wise thinking on dyslexia influenced me from the time when I first met him. I also remember the really skilled teaching carried out by Gill Cotterell, whose *Checklist of Basic Sounds* provided invaluable guidance to all intending teachers of dyslexics. It was here, too, that I first met Marion Welchman. Having learned of the committee's existence she immediately sought us out. My friendship with Marion started then and there and continued until her death a few years ago.

Assessment and teaching at Bangor

Encouraged by the developments at the Word Blind Centre and realising that there was a need for both assessment and teaching, I tried my hand at both. I was fortunate to be appointed to the Chair of Psychology at Bangor in 1963, and this left me free to research any area within psychology of my own choosing; in those days, thank goodness, the governments supplied funds but did not use this as a way of interfering in what universities did. If I had not had this freedom I doubt if I would ever have been able to convince the educational establishment of the day that dyslexia was something which they should take seriously.

At the end of the 1960s I was joined in this work by Elaine, my wife. She was already a qualified teacher with a background in language studies, and she now set about learning how to teach dyslexic children. There were many of them in need of help, and we invited other qualified teachers to our house to exchange ideas on teaching and to learn from one another. My partnership with Elaine in life turned from this time on into a partnership in dyslexia.

It somehow became known on the grapevine that if you wanted a dyslexia assessment you came to Bangor. When I started to carry out assessments the first requirement was to devise a standardised procedure for everybody. The Bangor Dyslexia Test (Miles 1997), started life as two double-sided pages copied by stencil. I have no space here to provide details of how it evolved into its present form. I think its aim can best be described as that of operationalising clinical judgements of dyslexia. A clinical judgement involves the use of small cues, and I set myself the job of specifying the cues to be used. I was then able to offer what may be called a stipulative definition of dyslexia: I was stipulating that if the manifestations of dyslexia are assumed to be those specified in the Bangor Dyslexia Test, then scientifically worthwhile discoveries will emerge.

It was a question of looking out not only for whether the responses were correct, but also what behaviours I judged to be significant, and then making provision for both in the scoring system. For instance, I judged it to be a dyslexia-positive response if the subject turned in their seat in working out 'left' and 'right', or if they showed inconsistency on the digit span test, for instance by failing to repeat four digits and succeeding with six. I was, if you like, giving indicators of dyslexia the chance to show themselves and be noted. A small number of dyslexia-positive responses might not mean anything, but the co-occurrence of several of them could be no accident, particularly if more than one member of the same family was known to be affected.

It was necessary, however, if I was to claim any scientific credibility, to submit my ideas to Karl Popper's principle of falsifiability. I believed that dyslexia was a syndrome and that I had captured some of its manifestations in the Bangor Dyslexia Test. I would be wrong, however, if normal spellers of adequate intelligence also obtained a high number of positive indicators. As I was able to show, however, in the test manual and in *Dyslexia: The Pattern of Difficulties* (Miles 1993) this was not the case; my ideas had to that extent resisted refutation and there were therefore phenomena which opponents of this concept of dyslexia were committed to explaining away.

Further confirmation came in two ways which I had not initially expected. When I gave talks to local Dyslexia Associations and described what I took to be the manifestations of dyslexia I could sense a large number of people in the audience nodding or otherwise indicating that what I was saying made sense to them. Secondly, when I came to write case histories in my books, time and time again parents have said to me something like, 'You might have been writing about our Johnnie'. It seems to me that the indicators of dyslexia, as specified in the Bangor Dyslexia Test, are recognised by parents, teachers and others as forming a coherent pattern.

The idea of 'positive indicators' of dyslexia was taken up by my colleagues, Rod Nicolson and Angela Fawcett, of the University of Sheffield, authors of four screening tests (PREST, DEST, DST and DAST). The aim of these four tests is that of determining the extent to which an individual is 'at risk' for dyslexia. It follows that the final decision as to whether dyslexia is present is left to someone else. Such a person would normally be an educational psychologist whose job would be to check on such things as adequate intelligence and standards of literacy. In contrast to the Sheffield tests, the Bangor Dyslexia Test aims at a definitive on-the-spot answer: if sufficient positive indicators are found (and literacy problems are occurring despite adequate intelligence and opportunity), then the person is dyslexic, since that is what being dyslexic means.

The scoring system of the Sheffield tests is specified down to the last detail, whereas that for the Bangor Dyslexia Test is devised so as to leave room for some degree of clinical judgement, with the resultant commitment to ensure that the person being tested, if found to be dyslexic, receives the appropriate help and counselling. Both the Bangor Dyslexia Test and the four Sheffield tests, therefore, contribute to our understanding of dyslexia, but in different ways.

Auditory and Visual Presentation of Stimuli

It was plain that dyslexics were weak at recall of digits when these digits were presented auditorily. During the 1970s it occurred to me to ask of they were also weak at recalling them when the digits were presented visually. I found that this was indeed the case. Up to this point in my research I had used no experimental apparatus such as is needed for very exact measurement, but from then on it was necessary to measure shorter time-intervals than was possible with a stop-watch. For this purpose I used a device called a tachistoscope, by means of which it was possible in controlled conditions of illumination to expose visual stimuli for time-intervals as short as a single millisecond (that is, one thousandth of a second). In an early study my colleague, Nick Ellis, found that if five digits were exposed the typical undergraduate required between 100 and 200 milliseconds exposure time in order to reproduce them correctly. However, four highly intelligent dyslexic students, who had achieved admission to university at a time when this was a very difficult thing to do, required on average 450 milliseconds. Nick and I also found that dyslexics around age twelve and a half years needed a longer time to respond to arrays of five, six and seven digits than did controls aged eight and a half matched for spelling age. This suggested that dyslexics were not simply delayed in their ability to respond quickly to visually presented digits – they were deviant; that is to say, they were manifesting a deficit. The issue of delay versus deficit has figured on many occasions since that time, and while there are some findings which do not require a deficit explanation, there are many others which do.

Elaine and I had long been suspicious of the idea that there were 'visual' dyslexics who learned better if material was presented auditorily, and 'auditory' dyslexics who learned better when material was presented visually. Now all my subjects in *Dyslexia: The Pattern of Difficulties* had been tested on their recall of auditorily presented digits, and data were available on 42 of them who had also been tested in the visual condition. If it were true that some subjects were visual learners and some were auditory learners, this predicts that those who scored highly in the visual condition would obtain a lower score in the auditory condition and vice versa. I divided the subjects into those who scored high, medium, low and very low in the visual condition and similarly in the case of the auditory condition (see *Dyslexia: The Pattern of Difficulties*, chapter 17 for details of how the groupings were arrived at). The results are set out in table 1.

Table 1

COMPARISON OF GRADES OF RESPONDING IN CONDITIONS OF AUDITORY AND VISUAL PRESENTATION

Visual Presentation ↓	Auditory Presentation →			
	High	Medium	Low	Very Low
High	0	1	1	1
Medium	0	1	3	6
Low	3	5	7	3
Very Low	0	2	8	1

It is plain from inspection of this table that there is no clustering of results which might show that those who are strong in conditions of auditory presentation are weak in conditions of visual presentation or vice versa. There is therefore no support in these data for the view that it is appropriate to distinguish 'auditory dyslexics' from 'visual dyslexics'. Most of the subjects were in fact weak at the recall of digits regardless of whether the presentation was auditory or visual.

Do people remain dyslexic?

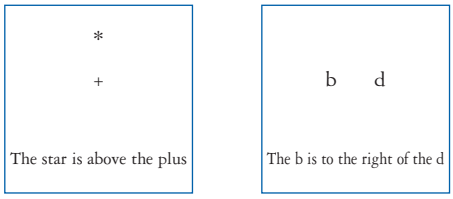
22 of my subjects came back for reassessment (see *Dyslexia: The Pattern of Difficulties*, chapter 19). It was therefore possible to compare the number of positive indicators obtained on the Bangor Dyslexia Test at the first assessment with that obtained at the second. My belief had always been that dyslexia is a lifelong condition, and I should have been seriously worried if I had found any large difference in respect of 'pluses' (positive indicators) between the two assessments. The scoring system of the test allows for development in the case of three out of the 10 items, Repeating Polysyllabic Words, Digits Forwards and Digits Reversed. It is assumed that even those handicapped by dyslexia will to some extent improve their performance on these three items without ceasing to be dyslexic. In the case of the other seven items adjustments for age in the scoring system were unnecessary. Clearly familial incidence does not change and if there is a history of left-right or b/d confusion it is possible to score a 'plus' or 'zero' on these two items even though the manifestations of confusion are no longer present. My concern was that if there had been serious fluctuation in the number of 'pluses' on re-testing this

Table 2

FREQUENCY DISTRIBUTION OF DIFFERENCES IN DYSLEXIA INDEX BETWEEN FIRST AND SECOND ASSESSMENTS

Difference	Frequency
+2	1
+1.5	1
+1	–
+0.5	3
0	3
–0.5	2
–1	4
–1.5	3
–2	4
–2.5	–
–3	1

Figure 1



would be evidence that the Bangor Dyslexia Test was failing to show that dyslexia is a lifelong condition. In fact all 22 of those re-tested still satisfied the criteria for being dyslexic. Table 2 shows the extent to which there was fluctuation. ('+' indicates more 'pluses' on re-testing, '–' indicates fewer).

It will be seen that in one of the 22 cases there was a discrepancy of three and in another a discrepancy of two, the maximum possible discrepancy being 10. It is not, of course, in dispute that dyslexics can learn new skills and compensatory strategies, but it appears that the dyslexia itself, as measured by the Bangor Dyslexia Test, does not go away.

Another piece of research, carried out by Joyce McCullough, involved presenting dyslexic adults and matched controls with a diagram and a sentence. There was a choice of two keys: if the sentence and the diagram were congruent they had to press one key (to signify 'true'), if incongruent, to press the other key (to signify 'false'). All responses were timed. For example, two of the stimuli were as shown in figure 1.

Various combinations of star sign, plus sign, above, below, left and right were presented, the subjects in each case having to indicate whether the sentence was true or false. (In the case of the first example given above the correct answer is 'true'; in the case of the second example it is 'false'.) When these tests were given to 10 dyslexic college students and 15 suitably matched controls, the results included the following, as set out in table 3. The time is given in seconds to three significant figures.

Table 3

RESPONSE TIME IN SECONDS TO VARIOUS COMBINATIONS OF STIMULI

	Dyslexics	Controls
* +	3.882	2.129
b d	5.984	2.473
Left	5.450	2.405
Right	5.245	2.377
Above	3.619	2.007
Below	3.624	2.125

It will be seen that in all these conditions the dyslexics needed more time than the controls before they could respond correctly. The difference, however, was more marked in the case of b and d and left and right than it was in the case of above and below and in the case of the star and the plus. In general the distinction between above and below causes fewer problems to dyslexics than the distinction between left and right, presumably because above and below remain the same which ever way one is facing, whereas left and right do not. In the case of the star and the plus one must suppose that only matching is needed – no naming is necessary, as it is in the case of b and d, and in the case of left and right.

The British Births Cohort Study (1970)

An exciting opportunity for research came my way when I was invited by Professor Neville Butler to participate in the British Births Cohort Study. The data are still being analysed, and we hope to gather the findings into a single volume at a later date.

In this paper I shall limit myself to reporting just one result, that relating to social class. I myself deplore dividing people into social classes, but that is not the point. Fortunately the organisers of the study collected some data on this subject, and, since we had isolated a group most of whose members we were confident were dyslexic in the required sense, it was a simple matter to check what relation, if any, existed between dyslexia and social class. The dyslexics were identified as those severe underachievers at reading or spelling who also showed positive indicators on at least two out of four items from the Bangor Dyslexia Test; 'under-achievement' at reading or spelling meant a lower score on a test of word recognition or spelling than would have been predicted from the child's combined score on two intelligence tests. 'Social class' was determined by the father's occupation in 1980, classified according to the Office of Classification of Occupations (1980), which distinguished the following groups:

I and II Professional occupations
IIInm Non-manual skilled occupations
IIIm Manual skilled occupations
IV Partly skilled occupations
V Unskilled occupations

Data were available in respect of 227 dyslexics and 5959 controls. Table 4 shows the number and percentage of dyslexics and controls falling into the six different groups.

Table 4

NUMBERS AND PERCENTAGES OF DYSLEXICS AND CONTROLS IN EACH OF THE SOCIAL GROUPS

	DYSLEXICS		CONTROL	
Social Class ↓	N	%	N	%
I	8	3.52	475	7.49
II	62	27.31	1662	27.89
IIInm	22	9.69	601	10.09
IIIm	97	42.73	2424	40.68
IV	25	11.01	644	10.81
V	13	5.73	153	2.57
TOTAL	227	100	5959	100

When the numbers in groups I, II, and IIIm were pooled and compared with the pooled numbers in group s IIIm, IV and V, the difference was non-significant (chi-squared (df 1) = 2.37, $p>0.05$). It is, indeed, plain from these figures that, whatever reason for the apparent slight excess of dyslexics in group V and the apparent shortfall in group I, the thesis that dyslexia is more common among the middle classes is clearly false. It is to be hoped, therefore, that the sneer that 'dyslexia' is a fashionable word used by middle class parents to cover up their children's lack of intelligence will be heard no more.

Mathematics and music

From the 1980s onwards I and my colleagues gave more thought to dyslexics' mathematical difficulties (Miles and Miles 2004) and we also began to take an interest in the area of dyslexia and music (Miles and Westcombe 2001). In both cases we decided that the problem for dyslexics is that they take an extra long time to learn the notation. In teaching calculation the wrong way to proceed is to write a lot of symbolic material on the blackboard, and music teachers who encourage their class to think that music means learning about crotchets and quavers or memorising the sequence EGBDF are likely to stifle any interest in music that their pupil might otherwise have had. To find out about numbers we need to let the child play with beads, blocks, Cuisinaire rods, etc.; in due course one can introduce the numerals 1, 2, 3 etc. and – with slow and careful explanation, symbols such as '+', 'x' and '='. Similarly, not until the child has listened to music with enjoyment and played some easy tunes is it time to say 'Now shall we try to write down for someone else what we have been playing?' Another thing that we have attempted to do is to document the many different kinds of stress to which dyslexics are exposed (Miles 2004).

Concluding remarks

The Bangor Dyslexia Test has been translated into German, Greek, Japanese (with modifications), Swedish and Welsh, and it is currently being translated into Arabic. Any translation into a new language forces one to consider very carefully exactly what one is looking for. I suspect that a useful formula will turn out to be that dyslexia is an imbalance between phonological skills and semantic skills (processing for meaning). This avoids any reference to reading skills, which in phonetically regular languages do not present dyslexics with all that much of a problem. If I had to summarise in a single sentence what I thought was the main characteristic of dyslexia as I have described it, I would be tempted to say that it involves a mismatch of skills. Phonological skills (that is, the ability to organise and recall speech sounds) are relatively weak and do not match up to the person's reasoning power (or the ability to 'process for meaning'), which in some cases may be strong.

T R Miles

Tim Miles is The Emeritus Professor at the University of Wales Bangor.

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The Impact of Dyslexia Assessment on Students' Self-esteem and Coping Strategies

BARBARA RIDDICK

'I was given a scrap of A4 lined paper with my condition on it and I kept it with me everywhere because it helped me believe I wasn't stupid. It was worth more to me than anything else in the world'. (Female university student aged 19)

INTRODUCTION

Although most practitioners who work with individuals with dyslexia are aware of the impact that dyslexia assessment can have, there is surprisingly little systematic research looking directly at the experience of being assessed and the possible long term outcomes of the experience.

If we see the ultimate purpose of dyslexia assessment as increasing the well-being, confidence, skills and coping strategies of individuals with dyslexia then it would appear logical to explore whether this is the case. When I started to research the experiences of dyslexic children and their parents (Riddick 1996) I was struck by how many mothers claimed that the first impact of assessment (usually at the Dyslexia Institute) on their child was that it increased their self-esteem or confidence. What was also striking was that over 50% of children reported that their mothers alone explained what dyslexia was and a further 30% reported that their mother in conjunction with another adult provided the main explanation. Only 20% of children reported that an educational professional (usually a dyslexia teacher) was involved in explaining dyslexia to them. For younger children in particular it was clear that feedback on their assessment was often mediated by a family member and less often a specialist dyslexia teacher. Whereas primary age children were often unaware of the full implications of being assessed for dyslexia, secondary age children tended to be more questioning and sometimes wary as to why they were undergoing this process.

The following two students said their parents had organised assessment when they were 14/15 years of age.

I was very embarrassed and very aware of being different from other people.

Grudgingly went along with it.

It was notable that there was a lot of individual variation in teenagers' reactions to being assessed. This is perhaps not surprising as a lot of factors such as who suggested they should be assessed, and what the purpose of assessment was claimed to be, appeared to influence their views.

STUDENT RESEARCH STUDY

In order to examine the process and impact of assessment more systematically we sent questionnaires (Riddick 2004, Farmer, Riddick & Sterling 2002) to recently assessed students registered as dyslexic at two English 'new'universities. We were aware that whereas for some students this would be a re-assessment to update an earlier one for others this would be a first assessment. The Dyslexia in Higher Education Report (Singleton 1999) uses the term identification to describe the processes that are carried out in order to establish whether a student has dyslexia. This can include both an initial screening test and a further in depth psychological assessment. As an outcome of this an evaluation of needs can be arranged in order to recommend appropriate provision including technological support. In designing a questionnaire it had to be born in mind that some students would have been identified when relatively young and are being re-assessed whereas others have been identified for the first time. In all cases the outcome of the assessment has important practical as well as personal implications, in that it affects whether a student is eligible for accommodations such as extra time in exams and can apply for additional support through the disabled students' allowance.

Because so many factors can influence how the overall assessment is perceived we broke them down into the following ten areas, and formulated a set of questions for each area. Although the questions were designed for university students many of them in spirit would be equally applicable to school age children:

(1) First or subsequent assessment (if subsequent, prior assessment experience)

(2) Self or other initiated

(3) Self-identity prior to assessment (did they already suspect they were dyslexic?)

(4) Student's view of dyslexia prior to assessment (positive, neutral, negative?)

(5) Student's view of how significant others regard dyslexia

(6) Whether nature and content of assessment is explained in advance

(7) Location, timing, pacing and content of the assessment

(8) Interpersonal factors (how does student perceive the assessor)

(9) The nature and timing of initial and any subsequent feedback

(10) The consequences of the assessment

Whilst earlier identification and high standard detailed psychological assessment are to be welcomed, they do raise the possibility that some students will have been assessed several times by the time they enter further or higher education.

Assessment is carried out at school not only for diagnostic and intervention purposes but also as a requirement so that students can receive special arrangements for public examinations such as GCSEs. The exam boards that grant such accommodations require an assessment to be 'up to date' usually specifying this as within the past two years.

This does raise the question of how both children and students feel about having to go through the assessment process. In the Dyslexia in Higher Education Working Party Report (Singleton 1999) it was noted that 43% of dyslexic students were identified for the first time whilst in Higher Education. The report also stated that there was anecdotal evidence that some students found the assessment process quite stressful for a variety of reasons, including not having an explanation of what would be involved.

A total of 74 students, 46 female and 28 male returned the questionnaires we sent out.

University of Southside 44	University of Northside 30
Males 19 Females 25	Males 9 Females 21

Prior To Assessment

One of the first questions they were asked was whether seeking an assessment was their own idea or was suggested by somebody else:

Own Decision	Joint decision	Suggested by someone else
32.5%	17.5%	50%

Out of the students for whom it was relevant to ask if they had already suspected they were dyslexic before they were first assessed the replies were as follows:

Already suspected	Did not suspect
67%	33%

It is interesting to note that even though two thirds of students already suspected they were dyslexic before they were assessed, half of the students did not seek assessment until it was suggested by somebody else.

Students had widely varying reactions to the idea that they should be assessed for dyslexia. This included both students who had been assessed previously and students who were being assessed for the first time.

Answers from the 44 students at the University of Southside could be divided into four main categories

Positive	Apprehensive	Negative	Ambivalent
17	17	3	3

No answer/not appropriate
4

Students who were categorised as apprehensive comprised 17 who said they were anxious, nervous, scared, fearful or worried, and 3 who described themselves as embarrassed or feeling stupid or daft.

I felt confused scared, what if there wasn't anything wrong with me then I'd just be thick. If there was something wrong how could anyone help me now.

Three students raised the concern that the assessment might indicate that they were not dyslexic but simply 'thick'. Informally this is a concern expressed by a number of students who are considering dyslexia assessment.

In some cases students expressed mixed feelings:

Trepidation, OK

nervous and pleased

Students who said they were embarrassed or negative about having to be assessed were more likely to say that someone else had suggested it and there was a feeling that this had come out of the blue.

Students who were positive about being assessed were more likely to have sought assessment and several of them expressed relief or happiness that their problems with academic work could be explained:

I had no problems with being assessed it was quite a relief

Happy there was a reason that I had problems studying

An important question to ask is what an individual thinks the main purpose of dyslexia assessment is before they undertake it. In considering the answers to this question some students focused on it leading to empowerment or help whereas others saw its main purpose as delineating the degree and nature of their difficulties.

Help/empowerment	Both	Assessing dyslexia/problems
27%	24%	49%

Female (24 years) *To find one's weak points* (deficit model)

Female (20 years) *So it gave me the means to achieve more and so people would acknowledge my disability* (empowerment model)

Further research is needed to confirm this but our data suggested that individuals who saw empowerment as an important part of the assessment process were more likely to also report that being identified as dyslexic raised their self-esteem and enhanced their coping strategies.

It would be helpful to know what factors influence students' initial perceptions and understandings of their processing difficulties and dyslexia. These may well have a bearing on how they view the purpose of their assessment. Does talking to someone well informed such as a studies advisor or dyslexia tutor change some students' perceptions of what the assessment is about in a positive way ?

Experiences during the Dyslexia Assessment

Overall 50% of students rated the formal psychological assessment as not or only a little stressful, whereas the other 50% rated it as moderately to unbearably stressful. It seems an unfortunate paradox that in order to obtain recognition and support, dyslexic students have to go through a process that half of them find quite stressful. Students reported that invariably assessors were sympathetic and understanding and at an interpersonal level did as much as they could in the circumstances to put them at their ease.

I felt a bit intimidated by the process not the assessor

The problem for the assessors is that however sensitively they carry out the assessment, students are being asked to perform some tasks which they find relatively difficult. Inevitably students are being tested however sympathetically this is handled. Unfortunately for some of these students testing has echoes of their past failures and humiliations in the education system:

Although it had been stated that 'It's not an exam' I felt that I was being tested, which experience has shown I don't do very well at. (Male, 37 years)

Some students mentioned more specific aspects of the assessment process such as the timed items as a source of stress:

Because I was constantly under time pressure. (Female 21 years)

At best it is important that all the organisational and personal factors leading up to the assessment are carried out as efficiently and sympathetically as possible. Students should be briefed in advance as to what the assessment will entail and apprehensive students should have the chance to talk over particular fears and anxieties and be given re-assurance where possible. Ideally this initial briefing will take place in the location where the assessment will be carried out so students are familiar with the setting.

After the Assessment

A vital part of the assessment process is the quality and nature of the feedback students receive (Turner 1997). McLoughlin, Fitzgibbon and Young (1994) argue that feedback is in fact the most important part of the assessment process. Students at both universities were asked to comment on and rate both the written and verbal feedback they had received. Often the written feedback was explained or interpreted for students by face to face meetings with specialist dyslexia advisors or support workers. This was reflected in their evaluations where they invariably gave the same ratings to the written and verbal feedback, emphasising the importance of seeing this as a unified package.

Response to feedback by Southside University cohort

	Male (19)	Female (25)	**Total (44)**
positive	18 (95%)	18 (72%)	**36 (82%)**
negative	1 (5%)	2 (8%)	**3 (7%)**
neutral mixed	0	2 (8%)	**2 (4.5%)**
hard to understand	0	2 (8%)	**2 (4.5%)**
no answer	0	1 (4%)	**2 (2%)**

Comments such as very helpful, interesting, explained a lot, useful, gave me a better understanding, good, excellent, informative, and quite accurate were all rated as positive. Two out of the three students who considered their feedback to be negative, said they did not understand their feedback and they were not clearly identified as dyslexic. One was told she had dyscalculia and the other said her assessment was inconclusive and suggested no follow up support. Perhaps it is not surprising that students who receive feedback that either contravenes their expectations or is more complex and/or equivocal than usual are more likely to be confused or disappointed by it.

Students at both universities were asked if being assessed as dyslexic changed the way they saw themselves and if so in what way. Answers to how it had changed their self-perception were classified as positive, mixed or negative. It has to be born in mind that some students knew they were dyslexic from an early age and were unlikely to recall whether this changed their self-perceptions.

Changed self-perception	**Yes**	**No**
Southside	28 (67%)	14 (33%)
Northside	17 (59%)	12 (41%)
Total	45 (63%)	26 (37%)

Perhaps more importantly than whether being assessed as dyslexic changed their self-perceptions was whether their change in self-perception was positive or negative.

Direction self-perception is changed in

positive	**mixed**	**negative**
39 (87%)	3 (6.5%)	3 (6.5%)

Although some students gave several reasons for their change of self-perception there were some predominant reasons. One was that it countered the negative view they had been given of themselves especially at school:

It finally put years of failure + misery + guilt behind me. (Male 31 years, biomedical science)

Relief, I was always teased at school for being stupid, now I could get help with my spelling (assessed at 8 years) I felt more confident after my spelling and reading improved, I was picked on less. (Female 22 years, finance)

Other students stressed the self-understanding that being identified as dyslexic gave them:

accepted myself more (male 51 years religious studies)

Only 3 students felt that being identified as dyslexic had a negative impact on their self-perception:

I felt that I was 'labelled' (disabled in some way) (Male, 21 years, business studies)

Less than who I thought I was previously (Male 31 years, law)

Because of the wide range of experiences and opportunities that each student has encountered it was hard to pick any outstanding factors which led to students having a more negative view of themselves after being assessed. It was tentatively noted that negative students were critical of the feedback they received and were not given an opportunity to talk it over sufficiently. But these factors also applied to several other students whose self-perception changed in a positive direction. Three students felt that their change in self-perception was mixed.

I *knew I had problems before but not 'officially' this made me feel quite inadequate. But I quite liked the fact that I had an IQ in the 'superior range' therefore Good + Bad.*

Acknowledging or using a label which denotes a disability or difference can be a complex and sometimes contradictory process (Low 1996) for the person concerned. Changing life-circumstances and experiences can make the process an ambivalent one sometimes with both positive and negative outcomes attached to using a particular label (Quicke and Winter 1994). Riddick (2000, 2004) has argued that labels may have a particularly important role to play for people with 'hidden disabilities' in that they can explain why it is not appropriate to judge certain individuals negatively against cultural norms for specific skills such as accurate spelling.

So many people had told me I was a bit thick and lazy without realising just how hard I would try to do the work. (Male, 26 years, computing)

It sounds better than left handed, clumsy, useless, thick, gorpy under achiever, I have been led to believe I am … (Female, 46 years)

Because of the importance of the impact of dyslexia assessment we also asked students to rate on a 5 point scale whether being identified as dyslexic had raised or lowered their self-esteem.

raised self esteem 1 2 3 4 5 lowered self-esteem

In summary almost 50% of students said that being told they were dyslexic raised their self-esteem, just over a quarter said their self-esteem remained the same and just under a quarter said it lowered their self-esteem. All the students who said it raised their self-esteem also said that if it changed their self-perception that was in a positive direction. Some of the students who rated their self-esteem as lowered also spoke of improved self-perception or more confidence in other parts of the questionnaire, illustrating the complexity of this issue and the need to interpret individual questions cautiously. Does this depend on how individual students define or construe self-esteem or does it say more about the subsequent support and environment they have been trying to cope in? How important a role do support tutors or disability advisors play in helping some students to develop a positive sense of what dyslexia means for them? Several students commented that whereas initially being identified as dyslexic had lowered their self-esteem, with time and support their self-esteem had been raised often beyond its pre-assessment level. This underlines the importance of viewing assessment as part of a package of support rather than an isolated one off event.

A final part of the questionnaire asked students about their coping strategies. Over 80% of students said they had adopted more effective coping strategies as a consequence of their assessment and subsequent support. Not surprisingly students who rated their self-esteem and self-perception as more positive as a result of their dyslexia assessment were more likely to report that they had also changed their coping strategies. This supports the notion that there is an interaction between how individuals perceive their dyslexia and the coping strategies they are willing to adopt.

What is also clear is that the support they are given and the environments they are trying to function in also play a critical part in this process.

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Screening

The Dyslexia Screener – A Resource for Schools and Colleges

Martin Turner

Background

I am happy to introduce the Dyslexia Screener to a wider audience because, in my twelve years as head of psychology at the Dyslexia Institute, the question of how to screen has tended, especially in recent years, to become a preponderant one. My definition of screening in this context would be as follows:

Screening is the psychometric testing of groups of individuals so as to identify, by means of consistent application of some criterion, those in need of further assessment and remediation of their special needs.

This has always been a technology we have experimented with in the Dyslexia Institute, in recent years offering packages to institutions ranging from the fairly simple to much more detailed. At its most detailed, a screening package provides about half the work involved in a full individual psychological assessment. This, of course, is well worth having, especially at half the price of the full assessment.

The actual model used is the six-test model that has evolved within the training service, born of the need for specialist teachers to have tests of ability, attainment and information processing skill with which to assess pupils referred to them. Those who have trained with the Institute will already be familiar with the selection of individually administrable tests, mostly pencil-and-paper, that have provided this repertoire. Over the years we have substituted new, more economical or more reliable tests for others, less efficient and longer in the tooth. But the basic model, contrasting diagnostic tests with tests of ability and attainment, has remained the same. Recently, we have provided trainees with the methodology to calculate a Dyslexia Index,[1] based on the six-test model. This is a way of summarising the degree of likely dyslexia present within the profile of any individual.

So the model is tried and true. Generations of specialist teachers at diploma level have based their case studies, including analysis of relevant learning difficulties, upon it; and we, as supervisors, have been in the privileged position of observing both the efficacy of the test repertoire in the hands of trainees and the incisiveness of the analysis that resulted. Recently some colleagues and I used it to survey a sample of 100 young offenders so as to cast light on the inflated and disputed claims of the prevalence of dyslexia in the incarcerated population.[2]

This, then, is the background to the design of the Dyslexia Screener. Following the success of their Dyscalculia Screener with Brian Butterworth,[3] nferNelson approached me to devise, with Pauline Smith, a companion, the Dyslexia Screener. This was to be an entirely computer-administered but individual battery, taken by the school or college pupil using only headphones and a mouse. Because the package can be installed on a network, many pupils can sit the battery simultaneously, useful for the large numbers involved in the secondary school or HE/FE situation. However, though the Dyscalculia Screener is, in the best sense, a noble experiment – there is as yet no agreed definition of what dyscalculia is nor how to tackle it through teaching – the Dyslexia Screener builds upon a decade or more of experience.

Existing screening resources

It is by no means the first entrant in this field. Pencil-and-paper screening tests have been around, their development encouraged at every turn by the Institute, for at least eight years. The Sheffield Tests should be mentioned, as they now comprise an all-age suite.[4] As a psychologist actively performing assessments, who sees a great deal of background assessment data on children, I have formed the impression that the least unreliable of screening batteries may be the Lucid CoPS (or Cognitive Profiling System), now complemented by CoPS Baseline, LASS Junior and Secondary and LADS Adult Dyslexia Screening.[5] These are sets of games-format tests with which individuals interact directly through a keyboard. They have been brought into use within a number of local educational authorities (LEAs).

The Centre for Curriculum, Evaluation and Management (CEM) Centre at the University of Durham provides what is perhaps the best of the baseline assessments. This is computer administered and includes a test of rhyming. This is followed by appropriate screens for all stages of the schooling cycle (ASPECTS, PIPS, YELLIS, MidYIS and ALIS), all on an industrial scale.[6]

Totally free, on the other hand, is the simple device of counting how many letters (capital or lower case) children know by name at school entry. This appears to be the best predictor of all of later literacy-learning problems! Moreover it is a simple matter to devise one's own screening model, adapted to one's own situation, using published group tests in combination. Once children have spent a year or so at school, it becomes possible to use more reliable, indeed efficient, measures. It may still be best to screen children fairly young, say at 6 – 7 (perhaps at Easter in Year 1), and this should be done for preference by a specialist or class teacher, rather than delegated to a teaching assistant. All children in the year should be screened, rather than relying on nomination.

A group test of ability, for instance the Naglieri Nonverbal Ability Test (NNAT),[7] which comes in levels and reaches down to age 5 – 6, can be combined with a test of spelling, perhaps the Single Word Spelling Test[8] (also in levels from age 6). Using Microsoft Excel, it is possible to list names, dates of

birth, ages, raw and standard scores on the two tests; create a column that subtracts the spelling standard score from the nonverbal ability (difference score); and rank the data in terms of the magnitude of these difference scores. It then should be decided what fraction of the pupil body would merit follow-up individual assessment (say 10%) and give these pupils, who have the largest discrepancy between ability and spelling, further, individually-administered tests. Possibilities would be the British Picture Vocabulary Scale,[9] together with a test of word recognition, such as the Wide Range Achievement Test – 3rd edition,[10] and a phonological test, such as Hatcher's Test of Phonological Awareness.[11] This provides for what is ultimately a five test model for such selected individuals, permitting a whole profile and Dyslexia Index calculation to be made for each individual. All test results should be communicated to parents, with a note of explanation – The DIY Readers' Support Pack for Parents[12] has been developed by the Dyslexia Institute with parents in mind – or a programme of intensive, preventative literacy teaching, such as the Active Literacy Kit (ALK),[13] should be implemented with children thus identified as at risk of dyslexia.

A New Development

So much for existing methods. Why the need for a new screening package? Four reasons stand out:

1. There is no clear winner among existing screening resources.
2. No problem-free methodology that commands general recognition and respect.
3. Rather than a sheep-and-goats, all-or-nothing, hit-or-miss diagnosis of dyslexia, it was felt a gradual degree-of-severity approach, based on a sliding scale called the Dyslexia Index, would furnish a more realistic tool.
4. The robustness of the teacher-training assessment model has been attested through the experience of practitioners throughout the last decade.

However, there are too few specialist dyslexia teachers, as there are too few educational psychologists, to provide individual screening assessments for the many individuals who need it.

So the Dyslexia Institute with nferNelson agreed to devise a computer-based package that would survey an individual's general ability, their efficient management of low-level information and their attainment in word-level literacy skills – reading and spelling. This would enable an estimate of the degree of presence of dyslexic features, when these are understood as meeting the two criteria for dyslexia:

a. A discrepancy between general ability and a regression-based prediction of achievement
b. A discrepancy between general ability and information skills (memory and speed of information processing).

Such a dyslexia component may be evaluated within any profile and provides the methodology of profile analysis at the core of the training diploma in dyslexia. However, the Dyslexia Screener elicits samples of these skills, evaluates them, analyses the contrasts and reports the findings in clear, user-friendly terms, all without the need for specialist training. Because the package is computer-administered, all this takes place courtesy of the software and places the technology at the service of those teachers who, without the benefit of a specialist training, nevertheless hold responsibilities for school pupils and students in their institutions.

The Structure of the Dyslexia Screener

Following the pattern established in the repertoire of the specialist dyslexia teacher, described above, the Screener adopts the six-test model, as shown in Table 1.

Table 1

THE SIX TEST MODEL			
Type	No.	Name	Description
General Reasoning	1	Missing pieces	Nonverbal reasoning
	2	Vocabulary	Verbal comprehension
Information Processing	3	Visual search	Perceptual speed
	4	Word sounds	Phonological processing
Literacy Skill	5	Reading	Word recognition and comprehension
	6	Spelling	Letter recognition, word segmentation and proofing

Many of these tests will be familiar to users in their general type. For instance the Vocabulary subtest utilises the format of the BPVS, requiring a spoken word to be matched with the appropriate choice among four pictures. Missing Pieces employs the well-known Raven-type methodology for nonverbal reasoning, where a matrix or pattern needs to be completed by a single piece.

It was necessary to devise reading, spelling and diagnostic tests, also, in keeping with the point-and-click mouse format for multiple choice. Letter and word identification items for reading, suitable for younger or less able pupils, selected in response to spoken instructions, were followed by sentence completion items. All this is familiar enough, but for spelling it was decided to widen the definition of spelling to include parts of words, endings and beginnings, and proofing – selection of the correctly spelled item amid distractors.

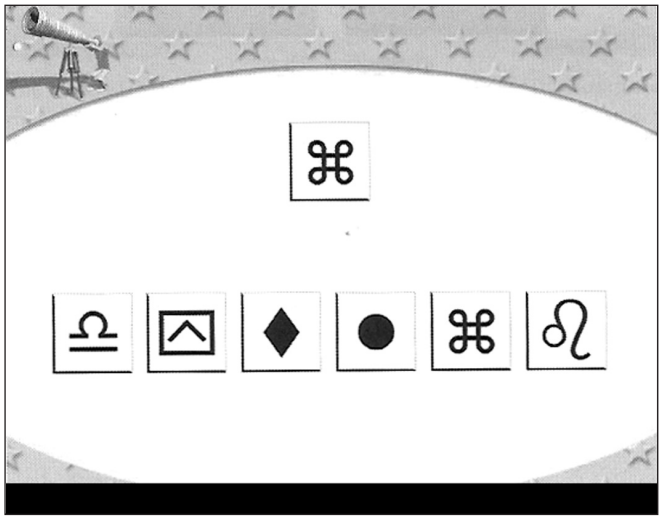
Still more challenging was the requirement to adapt traditional spoken tasks that address segmental phonology to the computer-administered format. Here it was decided to adopt methodologies that have proved surprisingly effective in group-administered pencil-and-paper tasks, namely the counting of syllables in words and nonwords. For younger test takers, the relevant phonological exercise is to identify pictures that represent initial or terminal sounds in words.

In the main, the multitude of diagnostic tests fall into the two categories of memory and speed – or accuracy and efficiency as they may also be thought of. To complete the six tests with one of speed of information processing it was decided to include an exercise in fast visual search, again utilising multi-choice methodology (see Figure 1), so that a shape is chosen identical to the target shape. Note that this task has no alphabetic component and relies, as far as we can suppose, on no obvious naming or verbal coding carrier skills.

Administration and Results

The Dyslexia Screener adapts to the test taker in that the programme administers to each one a sufficient number of

Figure 1



items at his or her own level. Each test taker sits all six subtests. In essence this is a full individual administration – and accordingly more reliable – and takes about half an hour. The looking up of normative values and evaluation of contrasts is all done by the software, so the responsibilities of the SENCo or administrator – still considerable – consist in the prior selection and preparation of candidates for the Screener and the management of the information yielded by the process. The latter, as readers of this article will realise, is highly sensitive; some essential considerations are given in the Manual but much depends on the commitment, and indeed wisdom, of the person responsible. At any rate, there are two ways forward for the individual who is shown to have some dyslexic tendencies: further assessment, perhaps from an educational psychologist, or a programme of remedial instruction and support.

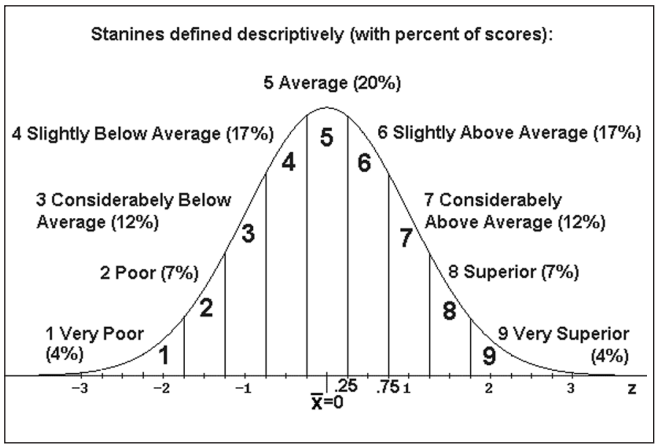
Table 2

THE DYSLEXIA INDEX			
Index	Letter Code	Description	% in the the DI dataset
<0	A	No dyslexia signs	11.7
0–0.49	B	Few dyslexia signs	22.8
0.5–0.99	C	Mild dyslexia	31.3
1.0–1.49	D	Moderate dyslexia	18.9
1.5–1.99	E	Severe dyslexia	11.1
>2.0	F	Very severe dyslexia	4.1

The programme produces an informative profile for each individual who sits the screening tests. For simplicity and to convey a sense of broader bands, as well as to ensure consistency with the Dyscalculia Screener, the *stanine* was adopted as the main statistical reorting unit. Already familiar to some extent in secondary schools, this behaves as intuitively as other standard scores, with which it is directly comparable (see Figure 2).

An individual report on each person taking the battery can be stored and printed out as required. Suggestions are made in the Manual as to courses of action appropriate to each degree

Figure 2



of severity on the Index (see Table 2) and to the appropriate referral pathways for the range of learning difficulties of which dyslexia is only one. A Technical Appendix gives performance details obtained with different groups, as well as of standardisation and obtained values for reliability (all subtests register split-half reliability values between 0.90 and 0.95). A further Appendix lists relevant organisations and useful websites; and there is a review of the best and most accessible of current dyslexia teaching resources.

FINALLY

In spite of the confidence that springs from our long experience with this assessment model, and from the attractive and user-friendly format that the computer provides, the value or otherwise of this resource remains to be proved in the hands of you, its users. Published at Easter 2004, it has made a successful start so far, but it is still too early to say what the experiences of users may be. We are especially keen to see if the Dyslexia Screener is a valuable addition to the organisational resources of institutions, whose needs were uppermost for the test designers. I hope, therefore, that those who wish to do so will feel free to get in touch with their feedback, both to the publisher, nferNelson[14] and to myself.[15] Criticism as well as praise will be gratefully received!

Martin Turner

Martin Turner was Head of psychology at the Dyslexia Institute for 12 years and is now working as an independent Educational Psychologist.

FOOTNOTES

1 Described fully in **Turner, M.** *Psychological Assessment Of Dyslexia.* London: Whurr, 1997.

2 See: **Turner, M., Sercombe, L.** and **Cuffe-Fuller, A.** Dyslexia and crime. *Dyslexia Review* vol. 12, no. 1, pp. 4–5. Autumn 2000.

3 For a review, see: **Turner, M.** and **Clayton, P.** Spotting the dots – review of Butterworth's Dyscalculia Screener. *Dyslexia Review* vol 14, no. 3, pp. 28–29, Summer 2003.

4 **Nicolson, R.** and **Fawcett, A.** Dyslexia Early Screening Test (DEST). London: Psychological Corporation, 1996; **Nicolson, R.** and **Fawcett, A.** Dyslexia Screening Test (DST). London: Psychological Corporation, 1996; **Fawcett, A.** and **Nicolson, R.** *Dyslexia Adult Screening Test* (DAST). London: Psychological Corporation, 1998; **Fawcett, A., Nicolson, R.** and **Lere, R.** *Pre-School Screening Tests* (PREST). London: Psychological Corporation, 2001.

5 The software suites are distributed by: **Lucid Research Limited,** 3 Spencer Street, Beverley, East Yorkshire, HU17 9EG; tel 01482 882121 or fax 01482 882911; see also http://www.lucid-research.com.

6 For full details, see: http://www.cemcentre.org/

7 **Naglieri, J.A.** *Naglieri Nonverbal Ability Test* (NNAT). San Antonio, Texas: Harcourt Brace/The Psychological Corporation, 1997.

8 **Sacre, L.** and **Masterson, J.** *Single Word Spelling Test* (SWST). Windsor, Berkshire: nfer-Nelson, 2000.

9 **Dunn, Ll.M., Dunn, L.M., Whetton, C.** and **Burley, J.** *British Picture Vocabulary Scale* 2nd ed'n (BPVS-II). Windsor, Berks: nfer-Nelson, 1997.

10 **Wilkinson, G.S.** *The Wide Range Achievement Test* – 3rd Edition (WRAT-3). Wilmington, Delaware: Wide Range, 1993.

11 **Hatcher, P.J.** Test Of Phonological Awareness. In *Sound Linkage: An Integrated Programme For Overcoming Reading Difficulties*. London: Whurr, 1994.

12 Dyslexia Institute Trading, Park House, Wick Road, Egham, Surrey - United Kingdom TW20 0HH; phone 01784 222337.

13 An initial literacy programme developed within the Dyslexia Institute, first published in 1999 and available from: LDA, Abbeygate House, East Road, Cambridge CB1 1DB; telephone 01223 357788.

14 nferNelson Publishing Company Ltd, The Chiswick Centre, 414 Chiswick High Road, London W4 5TF; phone 020 8996 8444; website http://www.nfer-nelson.co.uk.

15 c/o the *Dyslexia Review.*

Widening Opportunity for Dyslexic Learners – Is Learning Style Theory the Answer?

Learning Styles

TILLY MORTIMORE

Observant teachers have always noticed that individual students approach learning and study in different ways. Certain students perform better under particular conditions - some pick up information successfully from lectures, others prefer videos. Given a flat pack of furniture, one person will follow the written instructions; another will work from a mental picture conjured up in her own mind; a third will simply get the bits out of the box and build. Each will eventually end up with the bookshelves and no individual approach can have been said to be any more effective than another. They are simply different.

Two questions confront us as educators:

- Firstly, what makes people operate so differently?
- Secondly, can these individual preferences be utilised to help vulnerable learners?

The answer to the first question is that these approaches will have been affected by a number of factors. These include internal factors such as a person's cognitive profile of strengths, weaknesses and preferences, whether in the area of memory, attention, processing or any of the other cognitive domains that affect learning and daily life. To these can be added external factors such as the learner's social context, the effect of accumulated learning experiences upon habits and self concept and how these interact with the cognitive profile to create a learning identity. A number of researchers (see Mortimore 2003 for a review) suggest that each student's individual cognitive profile and learning style will affect his or her learning needs and experiences.

This suggests that cognitive style plays a role in the explanation as to why all learners do not learn in uniform ways. How can these individual differences be utilised? Researchers (Riding & Rayner, 1998) have attempted to answer the second question by asserting that matching or mismatching the mode of presentation with a student's preferred cognitive style can have a noticeable effect on performance. Evidence of support for this assumption can be found in many places, from within the dyslexia literature to mainstream inspection reports, Government policy documents, guidelines for teachers and national standards for teacher training (Coffield et al., 2004). The temptation to pursue the learning styles road may be particularly strong for teachers seeking ways to offer success to vulnerable dyslexic learners who often fail to thrive under standard classroom conditions. However before taking this path, three further crucial questions require answers:

- What is cognitive style?
- How can an individual's cognitive or learning style be assessed?
- What evidence is there to support the effectiveness of matching teaching style to learning style?

What is learning style? Cognitive style was defined (Allport, 1937) as an individual's habitual or preferred way of processing information. Learning style is the application of that preferred cognitive style to a learning situation. There is broad agreement over this but over little else in the field. Some researchers, such as Messick (1996), state that styles are stable, individual characteristics which partly control and organise more fluid strategies for learning. They suggest that style is hard-wired into the system and becomes crystallised with age and experience. They might therefore tend to discourage attempts to develop flexibility of style. Other researchers and educators, however, suggest that style is more changeable and situation specific. They would perhaps agree that individuals have a tendency to a preferred style but that there is both potential for change and that most learners will select the style that is appropriate to the demands of the situation. Such practitioners would encourage the development of flexibility. These positions remain somewhat at odds.

The learning style arena is anything but simple, although some sources tend to over-simplify it. A recent review by Coffield et al. (2004) discovered that learning style theorists

have devised more than 70 constructs, or models, of learning style and ways of identifying them. Some models are related to areas of the brain; others are rooted in theories of personality or motivation. Some are developmental and follow Piaget in suggesting that style evolves from stage to stage throughout a learner's life-time to achieve maturity. Some theorists have suggested ways in which teaching can be adapted to suit learning style and they have published research studies to back their contention that students learn more effectively when their learning styles are both acknowledged and catered for (See Riding and Rayner, 1998; Dunn and Dunn, 1995).

There could be said to be two main approaches to learning style (See Mortimore, 2003). One approach tends to be rooted within the individual and focuses upon the way in which an individual spontaneously processes and manipulates incoming information. In this approach, style is often described in terms such as 'visual or verbal'; 'wholistic or analytic' (Riding & Rayner, 1998). This processing approach emphasises the effect of matching the preferred style with the way in which information can be presented. The second approach, typified by Dunn and Dunn's (1995) work, is more broadly based, including emotional, sociological, environmental and physiological aspects of the individual's style. Practitioners use questionnaires to compile a cognitive mapping profile. This kind of cognitive mapping approach demands more of educators than simply changing the way information is presented, in that frequently there will be a need to change the environment, the way an educational institution might be organised and the attitudes of the professionals within it.

It is tempting for practitioners, faced by the challenge of including and supporting vulnerable learners such as those with dyslexia, within their institutions, to adopt any strategy that seems promising. Learning style theory has been introduced into some mainstream settings and seems particularly relevant to the inclusion agenda with its emphasis on changing the learning environment to accommodate diversity. As Harry Chasty of the UK Dyslexia Institute suggested in 1985, 'If the child cannot learn from the way you teach, you will have to teach in the way that the child learns.' The suggestion that teachers will have to adapt their strategies to enable vulnerable learners to reach their potential also chimes with the perspective, embodied in the social model of disability, that it is up to institutions to embrace change and to remove barriers to diverse learners at all levels, physical, psychological and pedagogical.

What evidence is there, however, of the effectiveness of matching teaching style to learning style? Riding and Rayner (1998) present evidence from numerous studies to support the 'matching hypothesis' but it is not without its critics. However, the anecdotal experience of practitioners who work with dyslexic learners is that these vulnerable students are more comfortable and successful when enabled to use strategies that suit their learning strengths. The 'common sense' approach would support the 'matching hypothesis', however it is important to remain positively sceptical while trying out new approaches and to be aware that the learning style arena is a complex one where researchers are not unanimous in their endorsement or even in their acceptance of definitions. There are real dangers inherent in over-simplistic stereotyping where learners can be labelled as 'verbalisers or imagers', 'left or right brained' and exclusively taught in ways that match the label.

If a teacher does decide to apply learning style theory, how can a student's learning style be assessed? Learning style theory has been applied to such a variety of domains which include industry, management, medicine and education. This broad range has given rise to a proliferation of models of learning style, each with its own assessment instruments, strategies and competing claims. The danger is that these tools can be applied in ways for which they were not designed, by practitioners who are unfamiliar with the original source and context. Thus an instrument designed for management training may be used in an educational setting or a questionnaire designed for adults used with children. Mortimore (2003) presents a review of assessment techniques to help teachers to choose.

Currently style can be assessed using computer delivered activities such as questionnaires, interviews or observation of behaviours. Coffield et al.'s (2004) review suggested that all assessment measures for learning style should meet four psychometric criteria in terms of internal consistency, reliability and validity. Of all the tools they investigated, only one met those standards. However, this is not to say that these assessment instruments should be abandoned. They can be used carefully as a way of developing awareness of style and how it affects learning. Difficulties will only arise if judgements are then made about individuals' learning styles, students are labelled and teaching strategies are implemented rigidly. This can end up with a teacher being confronted by a student stating 'It's no good talking to me – I'm a visual learner and I don't do words'. Application of learning style theory will have limited rather than liberated such learners.

In the dyslexia literature there has recently been a tendency to suggest that there is a dyslexic style of learning and therefore there must be a 'dyslexic' style of teaching. Following on from West's (1997) work, dyslexic learners are reputed to show visuo-spatial talents. There is no current empirical evidence to support these suggestions and the assumption that dyslexic learners should be taught using visuo-spatial or kinaesthetic learning methods may well disadvantage those individuals who favour a more verbal style. This is an example of how applying learning style labels in a simplistic way can actually hinder learning. It is essential to keep sight of the fact that all learners are individuals and that any particular learner's style will have been affected by a wide range of factors.

So should teachers experiment with learning style? If Governments plan to invest scarce funds in initiatives based around learning style theory rather than other avenues, it is right that rigorous checks should be carried out. Teachers, however, should not be put off from giving vulnerable learners the chance to discover more about the way they learn, or from helping them to try out new approaches which might make the best of their strengths and minimize their weaknesses. If research or, indeed, experience indicates that matching modes of presentation with preferred learning styles can facilitate learning, vulnerable learners should be offered this opportunity. The evidence (Ott, 1997) shows that multi-sensory techniques are successful for dyslexic learners on

literacy programmes, as these methods enable students to compensate for weaker channels of processing. It is logical to apply multi-sensory approaches to other aspects of learning.

Evidence as to the reliability of style measures and the efficacy of style matching may remain contradictory, but Coffield's team admitted that research supports the suggestion that students become more motivated to learn by knowing more about their own strengths and weaknesses as learners. This is confirmed by practitioners and by the data gathered from interviews in my current research project (Mortimore, 2004, in preparation). There seems to be growing agreement that it is both helpful academically and emotionally empowering to develop the students' awareness of how they learn, along with their ability consciously to use a range of strategies, visual, practical, kinaesthetic, over and above the conventionally verbal modes prevalent, particularly in secondary education, in the UK.

It seems that the provision of a language, in which students can discuss the way in which they learn, will allow them to begin to understand the processes and to feel more in control of them (Desmedt and Valcke, 2003). This process also helps to build bridges between students and teachers and acknowledges that ways of learning which may be different from the standard ways accepted in an institution are respectable. This can empower students and allow them to transform what may formerly have been dependent or humiliating relationships with teachers into ones built on trust and mutual respect. It is also essential to develop teachers' ability to incorporate variety into the ways in which they present material to learners, particularly if these learners are vulnerable and are disadvantaged by literacy difficulties or an inability to cope quickly with material presented verbally. If teachers can respond more flexibly to the ways in which their students learn and can offer these students the choice of a wider repertoire of techniques to try out, the quality of teaching and learning must be enhanced. Practical suggestions of the sort found in texts such as Mortimore (2003), Given and Reid (1999) offer the opportunity to encourage students to consider their learning style and to experiment in order to discover what works for them.

Conclusion

In a climate which encourages inclusion and fosters the development of dyslexia friendly schools, any means by which educators can be helped to adapt their practice, and by which students can be encouraged to examine the ways in which they learn best, are to be welcomed. Although educators should be careful not to make simplistic judgements, the learning style approach seems to offer students respect for their particular ways of dealing with a learning task, to rebuild confidence and to enhance the teacher/student relationship. It also offers institutions a chance to consider how to implement the kind of cultural change which can make them 'dyslexia friendly'. Dunn and Dunn (1995) argued that it is those students with the more extreme learning styles who are most vulnerable to inappropriate presentation modes. These are the students who are most likely to find traditional text based teaching methods less congenial and who may find the strategies promoted by handbooks from practitioners such as Mortimore (2003) and Given and Reid (1999) most useful. Applied with caution, learning style theory has much to offer.

Tilly Mortimore

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Inclusion

Inclusion or Choice

Steve Chinn

One of the fundamental instincts of humans is to protect their children. It is an instinct that anyone working in the special needs field will have experienced. I am the father of a child with special needs and my instinct to protect her can lead me to having very strong opinions about the events that surround and influence her life. The first draft I wrote of this article drifted from objectivity under the influence of that response. This is the second version. I hope you find it objective and that it stimulates child centred debate whatever thoughts you have on Inclusion.

Many educational innovations come in like a pendulum. They start slowly, gather speed and momentum, knocking any opposition to one side as they reach maximum speed, then gradually slow down, stop and change direction. I sense, and if I'm being honest, I hope, that Inclusion is past its maximum speed. It's not that I am against the principle of Inclusion. It seems to me that Inclusion is a fundamental human right, but so is choice and in implementing Inclusion *for all* then we are denying some children an education appropriate to their needs. The 'one size fits all' approach has been criticized for comprehensive schools. It is that one size fits all that worries me about the implementation of Inclusion.

Inclusion is grounded in history. The way society treated those who were 'different' was to exclude them. This was neither right nor justifiable, but I have doubts as to whether the current realities of 'Inclusion for All' are helping as many children as they should. And the ones that are not being helped are from a most vulnerable section of our society. All disabilities are different and even levels within a disability have different outcomes and manifestations. I want to suggest that it may be necessary to have systems rather than a system. We have to avoid the 'bog standard' approach and maintain choices.

Inclusion is a big idea and I am not sure I can come up with a big article that expresses all my concerns, some of which are latent and intuitive. What I do want is more application of the simple question, 'What if?'. Tom Viall of the IDA recently wrote an article on Unintended Outcomes. I think Inclusion is deep into Unintended Outcomes country.

There is always going to be a danger in the over-application of a principle. I believe that any educational idea that is rounded off by 'for all' or indeed as 'the cure' or 'the solution' is guaranteed to fail in that totality. A more cautious, flexible and responsive approach can cover the inevitable exceptions that may undermine what may be a very important and appropriate principle for many learners. I believe that the wondrous variation of humanity and the individual nature of individuals means that the implementation of a 'for all' policy must have many adjustments built in to account for each individual person whose life may be adversely affected by that policy. I am not sure that those adjustments are currently widely available and, worse still, I suspect that many of the remaining options are being closed down, maybe irreversibly.

It can appear that some supporters of inclusion make the assumption that merely placing the child in the same environment creates that inclusion. They assume that inclusion is just 'being there' or 'being a part of being there'. A somewhat crude analogy would be placing a child in a wheelchair in a building with no lift and expecting him to get upstairs or putting a dyslexic child in a library and expecting him to start reading. To make Inclusion work takes a great deal of work and, at the risk of being sentimental, and quoting from the one Head who made Inclusion work for my daughter, it has to be from the heart. And even then there will be children and times for children when inclusion is not appropriate.

There are some questions that verge on the rhetorical. For example, can one train all the teachers that a child may meet at their school to have that empathetic heart? (Not every teacher wants to deal with special needs learners and not every teacher can. It's just another example of diversity.) Are some special needs incompatible with others? (As a minor example, we had two boys in the same classroom, one needed a non-distracting environment and the other could not concentrate without tapping the table. We did resolve the conflict!) Do we rely too heavily on support assistants? Maybe the simple presence of a support person absolves some teachers of the full responsibility for a child. And each extra person who works with a child increases the need for effective communication.

One of the issues that concerns me about Inclusion is that sometimes those who so enthusiastically promote the principle overlook the fact that it might have some weaknesses. The moral high ground can be above the clouds of reality. It is hard to argue against a principle that, on the surface, seems to be so humanitarian and so grounded in human rights, but we need to look below the surface. For example, the cynical side of my nature believes that some perceive enticing financial benefits to Inclusion. They can close special schools and pretend that they are closing them in the cause of equality. A sad consequence of the closing of so many special schools is the removal of choice for children, parents and educators. It is not necessarily the choice of an alternative school for the duration of the child's education, but the lack of choice for times, maybe a year or two, when choice may make all the difference to the future of the child.

Sadly, not all schools do a good job with Inclusion. It takes a lot of resources and a lot of time to train teachers and Support Assistants (on whom the education of many SEN children

seems to depend). The results for GCSEs this year drew attention to the underachievers. It is just possible that some of these are inappropriately included children.

For example, in the specific field of dyslexia, I have always thought that the concept of 'Dyslexia Friendly Schools' was excellent. Indeed as a founder and ex-Chair of CReSTeD I would be expected to believe in such a concept, but it seems to be applied to schools somewhat casually in some cases. And children suffer as a consequence. I recently came across a secondary school that called its dyslexia centre a 'Centre of Excellence' after two just years in existence. It is worrying when self-evaluation is so very confident.

Let me take a specific look at my County's Inclusion Plan. It has a Charter which states,

'We believe that every child and young person should have an equal right to:

- Be included as a valued, responsible and equal member of the learning community with all other children and young people of the same age.
- Have access to a broad, balanced and inclusive curriculum experience and differentiated teaching and learning.
- Support to enable them to achieve their full potential and to be included in a life long learning process.
- Attend appropriate and local provision with appropriate resources and support networks.
- Have their views heard and contribution recognized.'

Now I could go deeper into its detail, but let's just confine ourselves to the underlying principles and just a few concerns, because although I have respect for the principle, reality can create problems.

'Be included as a …' These are laudable words and are the essence of the inclusion principle, but they lack a sense of reality. If you can't read, you are not equal in schools, if you can't spell, people judge you as unintelligent, if you are clumsy, people judge you as useless as games. Valuing difference is not always an adolescent skill. That requires a lot of work on ethos.

'Have access to a …' Reality bites again. Classes with a high proportion of included SEN or AEN children are often less focused. Differentiation takes time, time now and a long term investment in time to build resources. It takes a great deal of work to enable some pupils to access the curriculum. Are we sure we know what 'broad, balanced and inclusive' mean anyway? And are we sure it is advantageous for all pupils?

'Support to enable …' How do we know what is full potential? This is truly dangerous ground. How is the support defined and provided? How many children who need support fail to get any? I have heard so many woolly descriptions of 'support'. And even then support can identify a child as 'special' and make him feel less included. There are so many contradictions and pitfalls in even these simple principles. Inclusion should be about the subtleties of recognizing the individual beyond the principle.

'Attend appropriate …' Again the words are fine, but appropriate is likely to be defined by the special needs and the special needs are not always easy to identify completely and not all teachers acknowledge or adjust for them even when they are identified.

'Have their views …' No one should object to these pupils having their contributions recognised. What is more difficult to predict, and indeed guide, is how the pupils themselves value their contributions. My own family experiences are that the child is not always listened to. Sometimes they are not even asked. Assumptions are a dangerous activity.

I fear that 'Inclusion for all' is fundamentally flawed by those two simple words 'for all' and principles that radically affect the lives of children should not be flawed. 'Inclusion' per se is inherently not flawed, indeed it is a fundamental human right, but to force so many children in to one mould is unfair and is not going to achieve the fair outcomes that those who support Inclusion undoubtedly wish, and it would be tragic to see a great principle judged harshly because it has been inappropriately implemented. The rejection of the 'one size fits all' principle is happening in general mainstream provision. We need for that same pragmatic decision to be made for the education of special needs children. We should acknowledge that some pupils may need intensive intervention for a while in order to learn the skills that can take them back to being included members of society, and that may mean specialist schooling in a specialist environment. It would be good to have that choice. My hypothesis is that without that choice, 'Inclusion for all' will result in exclusion for some.

Steve Chinn

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Counselling

Davis Dyslexia Counselling – A Different Approach to Working with People with Dyslexia

ROSEMARY SAVINSON

Over the last 11 years working with dyslexic learners, I have become increasingly aware of the need to use a variety of strategies to suit individual needs and learning styles. As we well know, dyslexic learners find phonological processing very difficult and are often very puzzled when we ask them to identify particular sounds within a word. We know too that short-term memory may be a problem, so that learners may often fully understand a concept (such as the old chestnut of 'their' and 'there', not to mention 'they're'), only to have forgotten it completely the next time they come across it.

Some years back, I attended a lecture by Ronald Davis and became interested by his insights into the dyslexic thinking style and his approaches to working with learners. A few years on, having attended a series of specialist courses and tried the methods with many learners, I am still enthusiastic. Many people will have come across Davis's theories and methods and they are also described in the new publication and website, 'A Framework for Understanding Dyslexia'. In this article, I will focus on my experiences of working with learners using Davis techniques.

The principles of the approach stem from the premise that dyslexic difficulties are an intrinsic part of the dyslexic thinking style, which favours a visual or kinaesthetic, rather than a verbal style. Some thinkers may hear little or no 'inner voice', so that they may not make an automatic symbol / sound connection. Similarly, people may not punctuate by listening for pauses, as they are not hearing the words as they read:

'When I am told to put a comma when I hear a pause for breath, I just see a person standing there holding their breath.' (Louise, learner)

The reading process itself may consist of conjuring up an image, or a sense, such as touch or smell, rather than hearing the sounds of the words or letters. Hence people may experience confusion most acutely when encountering words which do not readily conjure up an image, such as 'the', 'and' or 'of' - in fact almost all the 'Dolch list' words which make up the mortar between the bricks of our language. Davis calls these words 'triggers' as they trigger confusion.

The words of the language, as they are written or spoken, do not seem to play any role in my mechanism of thought. (A quote from Einstein *in* West 1997.)

There may be other triggers, for example, individual letters or symbols, particular sounds or movements, for example when writing. When a puzzling letter is encountered, the person may try to make sense of it visually by turning it over in their mind, turning b to d to p to q. The trigger can be connected to some deep-seated experience, such as buried memories of unhappy attempts to write at school. Often, the letters in a person's name may act as triggers.

People may have a low threshold for confusion, especially when dealing with areas which their thinking style does not readily accommodate. As they encounter triggers, their confusion may mount almost imperceptibly, like waves, until it finally manifests itself as a form of sensory disturbance, known as moments of 'disorientation' which throw the mind off-track. The disturbance is often visual, causing those familiar features such as reading miscues, tracking difficulties or print instability. It may also be auditory (sounds may appear louder or quieter, nearer or further away) or affect balance and co-ordination (dizziness, poor balance, clumsiness). Another effect can be the distortion of one's sense of time (causing hyper- or hypo-activity or a sense of time speeding up or slowing down). To give a personal example, I have poor co-ordination and handwriting difficulties, especially with 'up/down' strokes such as 'l', which I often omit or stumble over. I was asked to slowly write a very large, lower case 'l' on a flipchart. As I came to the curve at the bottom of the letter, I experienced an acute sense of balance and motion sickness.

So how do we address these issues? I believe the reason why these methods are so satisfying is that they work collaboratively with the learner to discover and tackle the root causes of their own individual difficulties. The methods are wide-ranging but will always contain two main elements:

- using a mental focusing technique to overcome the effects of disorientation
- detecting and tackling the learner's own 'triggers'

We begin with an in-depth interview where I describe how the programme works and the learner identifies their own strengths, difficulties and goals. The learner is actively encouraged from the outset to take some responsibility for their own learning; indeed, the programme can only succeed if the learner is motivated to want to address their difficulties.

Next follows an introduction to the mental focusing technique best suited to the learner. The first, 'orientation counselling' is a visualisation process; the alternative, 'alignment', is more kinaesthetic, better suited to someone who can sense feelings more strongly than they can visualise. The learner then does an activity which usually triggers confusion, for example, reading. The aim is to enable them to recognise signs of disorientation and to practise using their focusing technique to get back on track. One learner said it was like having his own personal reset button!

As they progress, learners practise using this technique to ensure really accurate visual and auditory perception, balance and co-ordination. Learners 'fine-tune' their techniques by balancing on one leg and catching two soft balls together, using their orientation or alignment to steady themselves. This is an integral part of a session, often done at the beginning to ensure that the learner's perception is at its most accurate.

With clear perception, learners can begin to address the sources of their confusion. With all Davis work, clay (soft, white plasticene) is used. The learner works on triggers by making them in clay and mastering them, using their alignment or orientation to ensure that their brain is receiving accurate messages.

The first step for most learners is to make the alphabet. While many learners will profess to know the alphabet, they will often have learnt it by rote through the 'alphabet song' but may not be confident with every individual letter. The process is not about teaching phonics, but about making sure that learners feel comfortable and confident with every letter name and shape by identifying and overcoming individual trigger letters. Working together with the learner is like a voyage of discovery, as subconscious difficulties emerge which may cause surprise.

For example, one learner, David, often made errors when reading or writing the letter 'D', both upper and lower case. He talked about his embarrassment when trying to write his name (his surname also had a 'd' in it), especially when under pressure, for example, in the bank queue. This triggered off a visual disturbance when encountering a 'd' in print or a jerky movement when writing.

Learners start by making a capital alphabet out of clay, using a printed alphabet as a guide. As learners make the letters, I begin to identify possible problems – difficulty making a letter, an omission, a letter made smaller than the rest. Once the alphabet is made and laid out in a line on the table, learners do a variety of simple exercises – touching and saying the letter names, pointing and naming a letter and so on, all designed to identify culprit trigger letters.

The most revealing task is often when they look at and say the alphabet from Z to A. Even with it in front of them, a hesitation, omission or even a change of tone can indicate uncertainty or discomfort. We then explore the possible source of confusion – is it this letter or the previous one? Are they confusing different letters? What are the similarities and differences? Learners tackle problem letters by using alignment or orientation to perceive the letter shape accurately, say its name and explore all sources of possible confusion until they feel comfortable and confident. We are moving away from rote learning towards a deeper level of real understanding. By using their focusing skills, learners may be perceiving these abstract symbols accurately for the first time. For example, David confused the letters /i/l/t (plus the issue of capital I? small l?).He could never read or spell words with 'ility' because the letters fused together in his mind. After this work, he was delighted to be able to see the individual letters clearly and distinctly.

The culmination of this activity is to be able to say the alphabet forwards and backwards without looking. Learners do this slowly and carefully, using their orientation/alignment to overcome moments of confusion and visualising or sensing their personal alphabet. This is a huge achievement, which makes learners feel justifiably proud of themselves. We carry on by using a similar process with lower case letters and punctuation symbols.

After this, the real fun begins as we start to tackle trigger words. As we know, words have 3 parts – the meaning / concept, the sound and the written form. The concept will come foremost (for example, we could go to another country and understand what a house was without knowing the word for it or how it was spelt). However, for these small, seemingly meaningless words, the learner may see the word itself but have no mental picture to help understand the concept.

The learner starts with the word's definition and examples from the dictionary, for instance, 'here', meaning 'in this place'. We will discuss the definition and I will encourage the learner to generate further examples until the meaning is clear and they can picture an example and model it in clay (for instance, someone holding a pen: the pen is here/ in this place). Then the learner will then make the word itself. Using their orientation/alignment, the learner will be able to look clearly at the model and the word together, say its meaning and name and so master a previously puzzling word.

How are trigger words selected? Davis has identified words that cause most people confusion. We might start with the ones which are easier to describe and model. I prefer to work from the learner's experience, so I select words which they may stumble over when reading or use wrongly in writing. Sometimes tackling one word leads us down a long path of exploration. For instance, a learner had tackled 'there', linking it to 'here' and 'where'. We then moved on to 'their'. The dictionary defines 'their' as 'belonging to them'. 'Them' is described as 'the object form of '*they*'. This started off several weeks' work, making models of grammar concepts (modelling 'I made pasta' to show subject, verb and object) and then working through all the subject and object pronouns and possessives (I/me/my/mine etc).

In addition to working on triggers, I use a series of techniques to increase reading fluency. The first steps are designed to improve left-right sequencing and whole word recognition. This is not a phonics programme. Learners cover words and reveal them letter by letter, saying letter names rather than sounds. It is a shared process: I supply the unfamiliar words and the learner sweeps their finger along the words and repeats them. Next, learners are encouraged to read the text in phrases and make a mental picture of what they are reading as they go along. This last technique works really well for punctuation too, as learners can often visualise what they have written and see where a new picture begins (a full stop) or is divided into parts (a comma). This technique helped a learner, Julie, to change her punctuation when she wrote:

'I felt my heart, miss a beat' and realised that the picture was completely wrong!

People often ask what is special about clay. I believe it is far more than a kinaesthetic tool. A model can be adapted until a concept is absolutely explicit. A learner modelled 'me' using the example: 'My friends invited me to dinner'. However, he modelled himself inviting them. After discussion, he altered the model to make it clear that he, as the object, was on the receiving end of the invitation. It is the combination of discussing, modelling, and mastering the finished model with really accurate perception which makes this process so powerful and memorable.

Besides working on trigger words, clay also works very successfully in addressing other difficulties, for example, maths concepts. Underlying concepts which affect mathematical understanding, such as 'change', 'order' and 'sequence' can all be modelled. A whole series of exercises has been developed which explores basic maths concepts using balls of clay, for example for making times tables and working out place value. This takes the learner away from a sea of abstract number symbols so that they can explore maths concepts visually and kinaesthetically. In fact, any concept can be explored. For example, learners with behavioural issues may tackle words such as 'consequence'. I have even used clay with a music student, tackling the music stave, note values and time signatures.

Alongside orientation/alignment, I introduce two other mental tools. One is 'release', essentially a relaxation tool to enable the learner to easily release the tension caused by over-concentration. The other is known as 'dial-setting' and provides learners with a way of increasing or decreasing energy level. This simple, effective technique works especially well with learners who are hyper- or hypoactive.

How is a programme organised? Many of the practitioners working in the UK and indeed, around the world, work privately and offer intensive 30-hour programmes, usually over a week. A huge amount can be achieved during that time and by the end, learners will be able to use their newly acquired skills independently. However, they will need to continue to work on triggers and so at the end of the week, a colleague, friend or parent is briefed to continue to help. Review sessions with the Davis practitioner will be offered as appropriate.

In college, I have to see learners once a week for around an hour and a half. It is important to ensure continuity, so I will not offer a programme to a learner who is only in college for a short time. Sessions may need to be longer at the beginning, as learners are getting used to using the focusing techniques and doing initial alphabet work. It is very frustrating to be at an important breakthrough point only to realise that time's up for the week. After the initial stages, sessions can be shortened to an hour or so. In Abingdon College, some learners receive a week's programme with a Davis specialist and then receive follow-up in college.

While I work with adults, many practitioners work with children. The techniques work equally well with all ages. Most work is done on a one-to-one basis. However, in America, a programme called Davis Learning Strategies has been operating successfully for several years, with whole classes of infant-aged children of all learning styles. This programme uses similar methods, with adaptations made for the age of the learners and the group setting. A 7-year study of this programme showed that the methods worked well as a preventative measure as there were no special needs referrals among pupils who had been through the programme, while able learners were also stimulated. Training in DLS strategies have just begun in the UK for Key Stage 1/2 teachers and may be of interest to those who are trying to create a truly dyslexia-friendly classroom.

So should people train in Davis methods? While techniques are described in Davis's 2 books, there is nothing like hands-on specialist-delivered training. My training has given me a breadth of knowledge and understanding and the confidence to use the practical techniques, which I could not have acquired otherwise. All training information is given on the UK website (www.davistraining.co.uk). A 4-day foundation course will be held in April and October 2005 and a Davis Learning Strategies teacher workshop is also planned for early next year.

For further information, the two books, 'The Gift of Dyslexia' and 'The Gift of Learning' and the international website, www.dyslexia.com, provide a good starting point. The DFES website (www.dfes.gov.uk/readwriteplus/understandingdyslexia/) contains information, case studies and some further web-links.

Rosemary Savinson

Rosemary Savinson is Dyslexia Co-ordinator at Greenwich Community College. She has trained in Davis Dyslexia counselling methods and has been using them with learners over the last 6 years.

Reference

West T G (1997)
In the mind's eye: visual thinkers, gifted people with dyslexia and other learning difficulties, computer images and the ironies of creativity.

Dyslexia Institute Training Service

If you are an experienced dyslexia specialist teacher, trained by the DI to Postgraduate Diploma level, you may be interested in sharing your expertise and experience with others by becoming a training tutor on DI Level 3 courses in dyslexia and literacy.

The courses are highly structured, training is given in delivery, and all tutors are mentored and supervised.

Courses run for a fixed number of weeks (typically 12 or 15) and tutors are employed at need, for one course at a time.

For further details, write, enclosing your CV, to

Janet Townend
Head of Training
The Dyslexia Institute
Park House
Wick Road
Egham
Surrey TW20 0HH

Training

Supporting Dyslexic Learners in Different Contexts

CfBT CTAD DI

Supporting Dyslexic Learners in Different Contexts is a new project, commissioned by the Adult Basic Skills Strategy Unit. It will be managed by CfBT and delivered in partnership with CTAD and the Dyslexia Institute.

Learners with specific learning difficulties are a priority group for the *Skills for Life* (SfL) strategy and in 2002 ABSSU commissioned a national development project to review teaching methods, materials and strategies and, from this review, to produce 'A Framework for Understanding Dyslexia'.

This project builds upon the framework document to provide a training programme for literacy, language and numeracy teachers, Learning Support Assistants (LSAs) and other support staff who have not previously been trained to work with dyslexic learners. It will be designed to meet their needs working across a range of settings, for example in FE and Adult and Community settings with particular focus on offender and workplace settings.

Training will consist of a one-day face-to-face event, delivered regionally to best meet local demands and is anticipated to be available from October 2005. This will be followed by 15 hours of distance learning, delivered via CD-ROM and the World Wide Web. This material will be modular and consist of core learning and 3 separate strands to cover *SfL* teachers and LSAs, offender staff and workplace staff such as Union Learning Representatives (ULRs) (see table below).

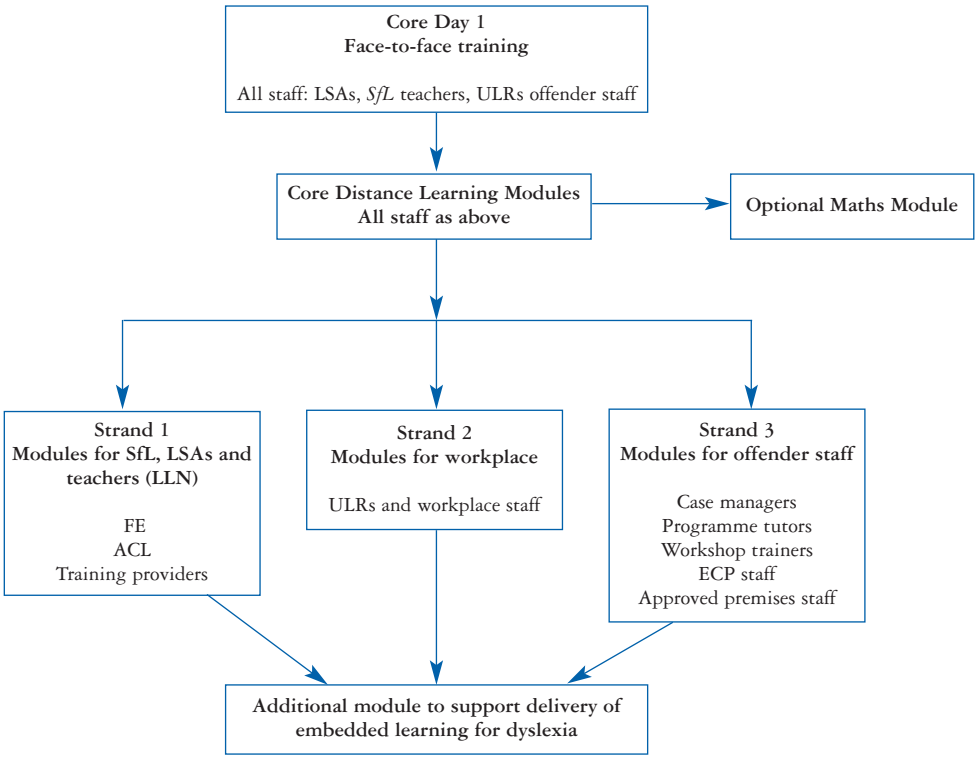
It is intended to pilot the training programme and delivery in April 2005 to ensure suitability across the settings. Any providers who would wish to find out more about becoming a pilot site for the trials should contact CfBT.

The project will train 100 teacher trainers, drawn from across the nine government regions, to deliver the programme to 1300 teachers and LSAs throughout England. These trainers will have extensive experience in the fields of both Dyslexia and Skills for Life, training delivery and have an extensive understanding of the different settings. They will form regional networks of teacher trainers that will complement the SfL Quality Initiative trainers to enable continued training regionally beyond the life of the project.

Trainers will be recruited through national advertisements during the spring of 2005 and the training the trainer events will be held in June and July of 2005. Any providers who wish to nominate staff or individual staff who are interested in becoming teacher trainers should contact CfBT.

For further information about this project please email: dnandakumar@cfbt.com

Any Guild members who are interested in either becoming trainers for the project or in contributing to the development of the strands, please email mrooms@dyslexia-inst.org.uk



ICT

Units of Sound v4 – NEWS

MARGARET ROOMS

All Guild members should have received a demonstration CD of Units of Sound v4 for their Summer edition of Dyslexia Review. We do know however that not everyone received it. Anyone still wanting a Demo can request one from the Dyslexia Institute web site (www.dyslexia-inst.org.uk) or by sending us an email at unitshelp@dyslexia-inst.org.uk

We are planning a new release for the Spring (don't worry, it will be a free upgrade to UofSv4 users) which will include:

- Larger screen size
- Print function on Dictation screens
- Print function on Check-spelling screens
- Mapping to Adult Core-Curriculum

If any of you have any ideas yourselves for more improvements please let me know ASAP. Please email suggestions to mrooms@dyslexia-inst.org.uk

It would also be nice to know how you are getting on with the programme, and more importantly, how are the students reacting to it?

Don't forget to look on the web site for patch downloads.

Margaret Rooms

SOFTWARE AND BOOK REVIEWS

KIDSPIRATION 2

From: Inspiration Software

Price: £70.44 single user licence

Kidspiration 2 is a wonderful piece of software for a planning tool and using mind-mapping images.

It has colourful but clear, uncluttered screens and provides many frameworks for topic work, classification, comparison, sorting and planning and much, much more. There are ideas and templates for using it within science, humanities and maths as well as reading and writing. A colleague of mine who teaches maths to dyslexic children was very impressed by the clear presentation of a wide variety of mathematical concepts.

The program could be used with individual children but could also work very well with groups.

The toolbars are 'child friendly' and there are the choices for background colours, spell check and even a recording option so they can tell their story as well. The new addition of a symbol maker enables the child to produce their own drawings to use within their stories.

The very easy to use drag and drop feature and wide choice of pictures enable even the child with weak literacy skills to produce a story plan, in the form of a spider gram, and develop this into a piece of well structured writing. The outline can be created using pictures and/or words and this is then easily expanded into a story within the writing section.

My only disappointment with the program is the slowness of the voice and I suspect this is because I use it on a laptop computer. There are many choices of voice, some of which I would steer the dyslexic child with auditory problems well away from, but on the whole it is useful for the young child or child with reading difficulties to hear as well as see the words.

This review does not do the program justice – you need to use it with children, to see the delight and enthusiasm with which they approach the tasks and the pride they have when they print out their final piece of work.

Glenys Heap

Training Principal
Dyslexia Institute

THE TROUBLE WITH MATHS

by Steve Chinn

Publisher:	RoutledgeFalmer
ISBN:	0-415-32498-X
Price:	£25

Picking up a new book from Steve Chinn is like getting the latest novel from a favourite writer: you know what you are going to get but you still get a thrill of anticipation. And in *The Trouble with Maths* Steve does not disappoint. Like all best selling authors Steve is constantly looking for a new angle and with this book it is to move the audience boundaries from dyslexia towards the mainstream teacher, SENCo, and support staff. In this volume he has applied his extensive knowledge, skills and wisdom to helping all learners with numeracy difficulties.

So what is included and does it work? The book covers all the areas you might expect: factors that affect learning, curriculum demands, maths thinking styles, language, anxiety, developmental perspectives, assessment and diagnosis. All are written with the Chinn signature of complete accessibility, enabling everyone to comprehend highly complex issues because the writer has such mastery of his subject and is also an expert communicator.

There are two chapters that deserve specific mention. The first is The Inconsistencies of Maths which deals with many apparently illogical areas of a totally logical subject such as:

In fractions big becomes small. For example ⅓ is smaller than ½.

This chapter also includes the joyous *It was just a matter of time* featured in Dyslexia Review Summer 2004.

The second is the final chapter *The nasties ... long division and fractions* which gives strategies for dealing with these notoriously stress inducing topics – for the teachers as well as students!

There are also five appendices giving very practical advice for teachers and schools.

To answer my earlier question *Does it work?* – it most certainly does. If anything, given the scale of children with numeracy difficulties, this may be where Chinn can be most effective in influencing the teaching of a subject which he clearly loves dearly.

In the recent NASEN/TES Book Awards, *The Trouble with Maths* won the Books for Learning and Teaching award.

Margaret Rooms

OVERCOMING DYSLEXIA: RESOURCE BOOK 1 (2004)

by Hilary Broomfield

Publisher:	Whurr
ISBN:	1 86156 398 1
Price:	£25

The presentation is simple and understandable for novices and provides the basics for developing both their understanding and their pupils' skills. The varied and often imaginative strategies and structures are derived from well-established dyslexia programmes and Hilary Broomfield takes these and places them squarely within the everyday context of the classroom, NLS and home work with the family.

Nothing here is new but the fact that everything needed for basic screening and planning and implementation can be found within one resource book will be a boon for busy teachers and SENCos and particularly useful for training those teachers and classroom assistants new to working with dyslexic learners.

The reader would have benefited from a basic introduction to the patterns of strengths and difficulties commonly encountered in children at risk for dyslexia. This could explain the importance of the skills covered and the difficulties some children may have in acquiring them. The assessment methodology and materials could perhaps have been better placed at the start of the text. Similarly the order in which the skills activities were presented might have been different. However these are minor criticisms of what is a highly usable book, offering both resources and a reassuring sense of programme structure to those entering this field.

Tilly Mortimore

Hornsby International Dyslexia Centre

Dyslexia and Mathematics, 2nd Edition

Edited by T R Miles and Elaine Miles

Publisher:	RoutledgeFalmer
ISBN:	0-415-31817-3
Price:	£18.99 (paperback)

Some of you may have seen this book in its 1st edition. This second edition is evolution rather than revolution with a large amount being unchanged, some updated and some new material on teaching number facts and dealing with maths handicaps in brain damaged cases. The book is unusual in having eight authors (some well known names such as Miles (x2), Chinn, Ashcroft, Henderson) each having written their own chapter. This gives a wide-ranging tour of the subject at the expense of jumps in style.

I like the broad brush description of dyslexia in maths as pupils showing '*a high ability to understand and operate with difficult concepts, but with an inability to remember what seem to the rest of us to be the simplest of number facts*'.

Many of the themes we know so well in literacy are shown reflected in maths. For instance rote learning does not work for the dyslexic pupil and strategies are needed to develop understanding. And again, the order of information given in a maths question is not always the order in which it is required for solving the problem – creating sequencing difficulties. A central theme is that structured multisensory teaching (literacy echoes again) is needed together with the use of concrete materials, many of which are mentioned.

This book is not a teaching handbook, more a general tour of the difficulties and general teaching strategies for the maths dyslexic. For the literacy teacher who wants to know more about maths and dyslexia this book presents a good introduction. For those who already have the first edition I would suggest they borrow someone else's second edition rather than purchasing it.

Stuart de Boer

Stuart has taught at the Leeds Centre for seven years. He teaches both literacy and maths and has led a number of courses for teachers who want to transfer their literacy teaching skills into the area of maths.

Day-to-Day Dyslexia in the Classroom – 2nd Edition

by Joy Pollock, Elisabeth Waller & Rody Politt

Publisher:	RoutledgeFalmer
ISBN:	0-415-33972-3
Price:	£16.99

This is the second edition of a book first published in 1994. It has been updated to include references to the National Literacy Strategy, the effective use of learning support assistants and the teaching of pupils diagnosed with Dyspraxia and Attention Deficit Disorder.

This comprehensive book is written primarily with the class teacher in mind but would also serve as a useful reference for SENCOs, learning support assistants and parents. It is thoughtfully written, logically organised and succeeds in using the minimum of jargon.

A dyslexic student is perceived to have '...different learning abilities rather than a learning disability'. The authors recommend the use of a combination of 'movement exercises' and 'cognitive tuition'. They present a range of teaching methods and practical approaches which can work well with dyslexic pupils. Throughout the book one is aware of the potential benefits of many of these approaches for all pupils.

The book begins with a description of dyslexia and how it relates to a child's early physical development and readiness to learn. It goes on to deal with assessment and diagnosis, areas of difficulty in speech and language processing, ADD and Dyspraxia, the use of movement programmes, reading analysis and suggestions for teaching spelling, handwriting, sequencing, orientation, numeracy, study skills and classroom management.

The authors stress the need for sensitivity when dealing with difficulties that may be encountered in relationships between professionals and parents. Class teachers are wisely encouraged not to be too quick to judge a child's behaviour but to stand back and look for possible underlying causes.

This is a good reference book. I concur with the BDA comments on the back cover of this edition:

"… it should be required reading of all beginning teachers in the course of their training..."

Joanna Jones

Dyslexia Support Tutor

DYSLEXIA INSTITUTE DIRECTORY

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ISSN 0308 6275