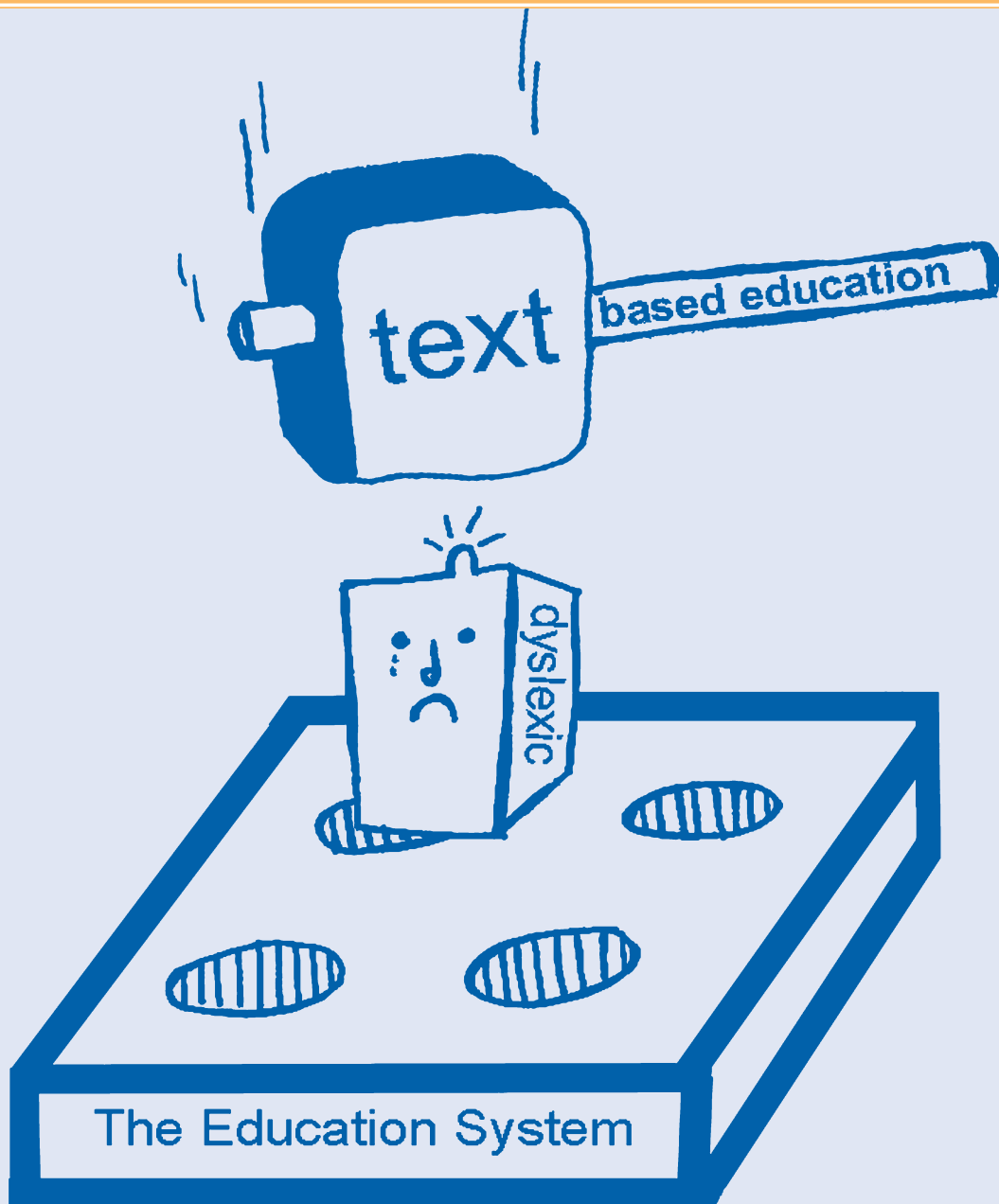


Dyslexia Review

THE JOURNAL OF THE DYSLEXIA INSTITUTE GUILD VOL 16 NO 3



Change the shape of the wHOLE

SUMMER 2005



DYSLEXIA REVIEW

The Journal of the Dyslexia Institute Guild

Editorial

I am currently working on projects in Primary, Secondary, FE and HE areas and it is interesting to see how SEN/Spld/ Dyslexia are considered within them. Whilst HE might be considered the new kid on the block in this area, it is rapidly catching up and possibly overtaking the others in provision for dyslexic students. It is only at HE that the dyslexic learner finally has a say in who delivers the specialist support: the money for the provision is his to spend rather than the institution's (via Disabled Students' Allowance). Only at HE can the dyslexic student be sure that the support is delivered by a teacher with an appropriate specialist qualification. In schools and FE, as we know, the support can often be delivered by a support assistant with minimal qualifications. How did we end up here? How did the dream of the specialist teacher in every school to teach the dyslexic students transform itself into this, where increasingly dyslexia is being airbrushed away.

Has Inclusion gone so far that they think they can do without SEN input now that everyone is effectively taking on the SEN responsibility? Alongside this, Baroness Warnock is having second thoughts about closing all those special schools and the papers are awash with explanations of 'statementing' and include references to dyslexia in terms of: *even children with dyslexia can be statemented*. Fortunately there are still some specialist schools for children with dyslexia (see CRESTeD for the list). But Inclusion has almost as many facets as the European Union and just as many different interpretations. We are going to take a look at Inclusive Learning in this year's Symposium which will include the role that specialists can play in the process. We have postponed the ESOL and Dyslexia theme which we have found needs a longer time for preparation.

2005 has been a bad year for losing some of our Dyslexia pioneers – and this term we say goodbye to Walter Bramley who passed away in May. We have included a tribute article in this issue.

Alongside goodbyes, there are always some Hellos – and I am pleased to welcome Estelle Doctor from the Institute of Education to our editorial committee.

Margaret Rooms (Editor)

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COVER: *Change the WHOLE by Mike Juggins, Dyslexic artist, writer and consultant*



The Dyslexia Institute and Hornsby International Dyslexia Centre: United We Stand

CONTRIBUTIONS FROM DI AND HIDC STAFF

The imminent merger of the Dyslexia Institute (DI) and the Hornsby International Dyslexia Centre (HIDC) presents opportunities and challenges for both organisations. What will the new merged organisation look like in practice and how will it affect services and provision? We asked some of the key players to explain.

SHIRLEY CRAMER (CEO OF DI) AND ANNA TYLER (CEO OF HIDC) GIVE THE STRATEGIC VIEW

We have always believed that ‘the whole is greater than the sum of the parts’ and that by working together whether this applies to individuals or organisations, you can achieve so much more. In the case of the merger of the Dyslexia Institute and the Hornsby International Dyslexia Centre, we believe that together, we can define and implement a new era in dyslexia training. With a similar vision and mission we know that we will be able to serve our clients better as one organisation.

Over the last few years, we have seen from Government reports, research studies and our own experience that there is a huge shortage of dyslexia expertise in all areas of education and training. Children are still leaving school unable to read and write; adults are struggling in basic skills because their tutors cannot meet their specific needs. One of the major barriers to improving the quality of life for dyslexic people is the lack of specialist teachers and trainers. As one organisation we believe we will be better able to meet the challenges of providing more skilled specialists in a wider variety of settings. By joining forces and sharing our collective knowledge and skills we have an unprecedented opportunity to address these issues and to make progress both in terms of the numbers of specialist teachers we train and in continuing to raise the standards of our programmes.

As one organisation with greater capacity, we will also be more competitive and stronger in all areas of activity. Our combined expertise will lead to innovation and will enable us to maintain our high standards and cutting edge. As a larger training provider we will have the scale and scope to investigate new delivery models and make optimum use of the new technologies.

It is important too that we have a united voice on national issues related to dyslexia and training with Government and educational organisations. We need decision makers and policy makers to understand the critical need for dyslexia expertise in every educational setting.

There is no doubt that by uniting our expertise, good will and passion for excellence, we will be able to better meet our mission and expand our vision.

We are grateful to all the staff and volunteers who have worked so hard to make this merger a reality and we look forward to extending dyslexia expertise across the English speaking world.

JANE DUPREE (PROGRAMME DIRECTOR OF THE HORNSBY DISTANCE LEARNING COURSE AND JAN TOWNEND (HEAD OF TRAINING AT THE DI AND HEAD OF TRAINING DESIGNATE OF THE NEW, MERGED TRAINING SERVICE) GIVE THE VIEW FROM TRAINING

Look no Further

Something old, something new, much to share, digest and review

Many of you will have seen the joint advertisement in the Times Educational Supplement and the recently produced joint Prospectus, between the Dyslexia Institute and the Hornsby International Dyslexia Centre using the header above, ‘Look no further’. As this phrase suggests, the newly merged organisation aims to be the most comprehensive provider of first class training for a wide range of people, all of whom have one goal in common: improved educational, social and vocational opportunities for people with dyslexia.

It will come as no surprise that we all approached this with a certain amount of trepidation: what if we couldn’t agree? What if we didn’t like each other? What if one partner felt hard-done-by? And how on earth are we going to do it in the timeframe?

Something old

Many of the courses currently available will remain as they are: the DI’s current Surrey and Region Open College Network (SROCN) courses for Teaching Assistants, Mainstream Teachers and SENCos, and Tutors of Adult Learners, for example; the Hornsby Foundation course and Teaching Study Skills course. The plan is to bring the last two into the SROCN fold, so that all our courses are externally accredited, at Postgraduate level by the University of York, and at other levels by SROCN. Through SROCN we hope our suite of courses will become part of the new National Qualifications Framework.



The DI is launching a new 18 month Live Mode Postgraduate Diploma in September 2005, at the same time as the Hornsby Centre has decided not to offer its OCR courses any longer; all prospective applicants for face-to-face training at this level will be directed towards the DI course. The exciting thing about this is that an additional course site is planned, at the Hornsby Centre in London, staffed by a team of tutors drawn from both partner organisations.

Something new

As part of this merger, a joint team of Hornsby and Dyslexia Institute trainers have formed a working party to develop new distance learning courses. After September 2005 students will no longer be able to register for any of these existing courses as they will be replaced with new ones, to be launched in January 2006.

You may be wondering whether the ethos of both parties has allowed for a fruitful and harmonious working relationship? There has been collaboration, not competition. There has been no quibbling; quality of provision has been the quest. So, surprisingly enough, the framework for the new courses was established within one morning's discussion as we circled around the selection of structured cumulative language programmes.

So why should prospective students look no further than the newly merged organisation to meet their needs? What do these new courses offer? Initially there will be two new distance learning courses launched in January 2006. Both of these will aim to offer first class training in their field.

The first will be the Post Graduate Diploma in Dyslexia and Literacy, which will have parity with the current Dyslexia Institute Live Mode course. Successful students will be eligible to apply for AMBDA and gain 120 CATS points at Master's Level, through the University of York (subject, of course, to their approval of the new programme). This two-year course will offer maximum flexibility. In Year 1, the Certificate year, students will be introduced to research background and theory relating to dyslexia, specialist teaching principles and assessment. In Year 2 students will select their preferred age range, linked to continuing professional development and receive their additional, tailor-made package of the latest assessment tools, which could include the WRIT, the WRAT Expanded and the Adult Reading Test (ART). Teaching will have some flexibility, to allow for group work and an Intervention Study in Module 10 will enable students to focus on a particular area of interest, such as mathematics and dyslexia, study skills or supporting students in higher education. The final module, Professional Issues and Related Practice is perhaps one of the most exciting developments. Students may complete their assignment through distance learning, or through a seminar and poster session by joining one of the taught courses or the Summer School.

Secondly, we all want to maintain the open access and international ethos of the original Hornsby Diploma and so a new distance learning course will be launched at the same

time. This course will again offer first class training. It will be suitable for parents, teaching assistants, people supporting adults in Further Education including the youth services, and overseas students who do not have qualified teacher status in their own country or a degree equivalent to UK standards. The core content will be to establish a detailed knowledge of how to deliver a structured multi sensory language programme. However, it will also include background research theory related to dyslexia and a module on using diagnostic non standardised assessment tools to aid the development of a suitable teaching programme. Whilst it is envisaged that this course will hold value as a stand alone course, and follow in the footsteps of the open access distance learning Hornsby Diploma, we are also applying for accreditation at Level 3. (This means the learning will be equivalent to a Level 3 NVQ course.) Therefore, on successful completion of the course, students will be able to use it as a stepping stone towards their own higher education.

So, how are we doing?

The answer to all the questions raised at the beginning is that it can be done, it is being done, and some of it has been done. It is really true that the new, merged Distance Learning was created in a single morning! This was achieved because we were already doing the same thing, in slightly different ways, and we discovered that there is far, far more that unites us than the few details that separate us. So, no longer in competition, but in partnership, those interested in dyslexia really need look no further!

[GEOFF GRANT \(HEAD OF MARKETING AT THE DI\) GIVES THE VIEW FROM MARKETING AND TRADING](#)

The coming together of probably two of the best known brands in the 'Dyslexia World', the Dyslexia Institute and the Hornsby International Dyslexia Centre, in marketing terms opens a door of opportunity and challenge. For example, we can now promote our enhanced range of training courses under one banner – and more cost effectively. Guild Members will have noted that in March we launched a series of half-page advertisements in the Educational Press under the headline 'Look no Further', highlighting the key message that we together can now offer an exciting and comprehensive range of courses in dyslexia and literacy for all. DI Trading Ltd., the trading arm of the Dyslexia Institute has carried the Hornsby logo and promoted the *Alpha to Omega* range of materials alongside the *DILP/UofS* resources since last October. This is just a tentative start, which we must now build on to ensure the new joint body grows and develops to meet the needs of our very diverse and world wide customer base.

[MARGARET ROOMS \(EDITOR OF DYSLEXIA REVIEW\) GIVES THE VIEW FROM THE DI GUILD AND HORNSBY FRIENDS](#)

The two membership organizations, DI Guild and the



Hornsby Friends, are similar in all main aspects. They both:

- Consist mostly of specialist dyslexia teachers
- Have open membership – if you are sufficiently interested to join, you can
- Support CPD for the members
- Provide a termly professional journal – Dyslexia Review and Hornsby Newsletter

The merger means that the Friends will receive full Guild

membership benefits, including discounts on materials from the DI, LDA and Don Johnston Special Needs Ltd until the date of their membership renewal – when we hope they will want to continue to receive these services by joining the new Guild/Friends (working title only). Enlarged membership will, I hope, give us the opportunity long dreamt of, to make some changes to the production of Dyslexia Review – which are, of course, costly. These are exciting times for the DI and HIDC and it is the Guild/Friends job to make sure that our members are among the first to reap the benefits.

HIDC and the Dyslexia Institute

Estelle Ann Lewin Doctor

We would like to welcome Estelle Doctor to the Editorial Committee of Dyslexia Review and thought you would be interested to know something of her background.

Dr Estelle Lewin Doctor is Director of the Literacy Assessment and Research Centre (LARC) at the Institute of Education, London where she is a Research Associate. Estelle took her PhD at Birkbeck College, University of London and is an Educational Psychologist of long experience both as an academic and as a practitioner. She has taught at universities in England and South Africa for over 30 years. For eight years she directed a team at a multilingual multidisciplinary Learning Disabilities Centre in South Africa, specialising in the assessment and diagnosis of reading and spelling disorders.

Much of her publishing output has been on ways of developing assessment and remedial programmes for people with such disorders, and her main research interest continues to be in this specialised field. She has trained post-graduate students and professionals in the use of her techniques.

She is a Chartered Psychologist, a Corporate Member of the British Dyslexia Association, and an accredited Forum facilitator for the Young Presidents Organisation (YPO).

The Literacy Assessment and Research Centre (LARC) provides assessment, a wide range of training courses (see below) and a consultancy service. It caters for:

- Primary, secondary and tertiary students, and adults who have difficulty with reading, spelling,

comprehension and memory, and offers precise assessment and guidelines for specific intervention

- Primary and secondary schools and LEAs who require professional resources, support, and expert advice on literacy projects and policies
- SEN staff, teachers, remedial specialists and students who require training in the theory underlying assessment and intervention, practical techniques and research methods
- Concerned parents who require help in managing and helping their children's literacy difficulties

In addition, it provides

- pre-literacy assessments for pre-readers
- assessment for special examination arrangements
- assessments for Disabled Students' Allowance
- assessment of adults
- study skills training
- courses for parents.

Further information may be found on her website: www.literacycentre.co.uk



Screening Students who have English as an Additional Language for Dyslexia

ESTELLE ANN LEWIN DOCTOR

Deciding whether EAL students are dyslexic is difficult, especially if they have not been assessed in their first language. This case study describes an attempt to address the issue of screening EAL students for dyslexia using the dual route cascade model (Coltheart et al, 2001). The reading errors of AN, a 41-year old male student who presented with dyslexic symptoms were analysed and used to address the issue of whether he was or was not dyslexic. The results have important implications for the screening of all students, and EAL students in particular.

What is dyslexia, and what is the least amount of information we need about a student's reading abilities to decide whether they are likely to be dyslexic? These questions face classroom teachers and also disability support officers up and down the country who are involved in screening students applying for the Disabled Students' Allowance. To answer the questions, many turn to the different screening packages that are available, commercially and otherwise, including Vinegrad's (1994) *Revised Dyslexia Checklist*, Singleton's *Lucid CoPS* (for very young children), LASS (for older children) and LADS for persons 16 years and older, or Turner and Smith's *Dyslexia Screener*. How effectively do they provide an answer?

After decades of debate there is still no consensus regarding how dyslexia differs from poor reading. Some researchers (Chen & Vellutino, 1997; Gough & Tunmer, 1986) have considered a listening comprehension/reading comprehension discrepancy definition to be useful in diagnosis, but it is less helpful for intervention as it still does not explain what dyslexia is. The once-ubiquitous 'discrepancy' definition (Stanovich, 1994) which treated IQ-discrepant poor readers differently from non-IQ discrepant poor readers has all but been abandoned (Stanovich et al., 1996). Where it is upheld it serves as an impediment to resources, financial and otherwise.

Whether they are screening EAL or first-language English speakers, most practitioners would favour a non-exclusionary, neutral definition of dyslexia, but this is highly unlikely to emerge because the definition will depend, ultimately, on a theory of reading and there is, as yet, no single accepted theory. Few would disagree, however, that at the cognitive level, reading involves a number of subsystems: a letter-recognition system, a word-recognition system, a system for converting letters into sounds, a system for retrieving meaning, etc. Students with dyslexia have difficulty accessing one or more of these systems.

Currently, the most theoretically-sound model for screening students, EAL or otherwise, for reading difficulties is derived from the related conceptual frameworks advocated by Morton and Frith (1995) and Jackson and Coltheart (2001). Morton and Frith distinguish three levels at which dyslexia should be analysed: behavioural, cognitive, and biological, while Jackson

and Coltheart (2001) differentiate between proximal and distal influences on dyslexia. At the *behavioural* level, the screener observes the student's performance on reading tasks. At the *cognitive* level the characteristics of the observed reading behaviour are explained in terms of the hypothesized properties of the reading system. At the *biological* level reading performance is explained in terms of brain structures or processes, or other biological reasons are sought to explain the observed reading behaviour. Assume that the screener makes the observation, at the *behavioural* level, that the student has difficulty working out the pronunciation of words never seen before. This would be a pointer towards dyslexia which could then be followed up at the *cognitive* level during a diagnostic assessment. The student may be asked to provide letter names, or letter sounds, to read words in which the complexity of the relationship between letters and sounds increases, to decide which of two homophones fits a particular context, etc. This would allow the diagnostician to explain the reading behaviour observed during screening in terms of a hypothetical model of the reading process which explains the cognitive properties of the reading system.

During the screening, the answer as to *why* the student has difficulty with, say, reading nonsense words might also be addressed from a *biological* perspective. If several of the student's relatives also have had reading difficulties, this might indicate a genetic explanation at the *biological* level. Further diagnostic analysis, using brain scanning techniques may yield explanations at the biological level indicating a specific brain abnormality in those areas of the brain upon which the processing of speech sounds depends. For obvious reasons, such assessments are not routine but they could indicate a causal chain which is internal, starting from a genetic deficit which has affected brain structure and resulting in reading difficulties. On the other hand, screening might reveal that no relatives had reading difficulties but that there were extremely stressful birth conditions, including the possibility of anoxia which could cause a temporal lobe abnormality and hence a defect in some of the brain processes involved in the processing of speech sounds. Or, if the student has suffered a blow to the head, this might indicate a neurological explanation at the biological level. In this case the causal chain would be external, from stressful birth to brain injury to reading difficulties, or from brain injury to reading difficulties.

Another pattern which might be observed while screening, regardless of first language, is that the student has no birth complications, no neurological complications, no early language problems and no genetic predisposition to dyslexia. Instead, the student may have been deprived, when learning to read, of tuition involving phonics, either because attendance at



school was sporadic, as is often the case with EAL students arriving in the UK from different cultures, or because inappropriate methods were used to teach reading. In this case the causal chain would be external and environmental but at the cognitive rather than the biological level. Knowledge of early educational history bears directly on understanding dyslexia.

The *proximal* cause is the last link in the chain, the link that directly influences reading. It is always at the cognitive level and indicates that one of the subsystems: letter-recognition, word-recognition, letter-sound conversion, semantics, is impaired or inaccessible. *Distal* causes may be cognitive, biological (genetic and/or environmental) or perceptual-cognitive. Thus, the purpose of the screening is to establish the distal and if possible, the proximal influences on dyslexia. This information may be gathered using a mixture of questionnaires and tests such as those mentioned above, but modified to give clearer answers to these specific questions.

There are several important points about the relationship between the proximal and distal causes of dyslexia of which the screener should be aware. Firstly, having English as an additional language is not a proximal cause of dyslexia and EAL students who are dyslexic will show the same pattern of difficulties as some non-EAL students. Secondly, several students may have the same proximal cause of dyslexia but widely differing distal causes: one student may have English as a first language, but have had language delay, a second may have had normal language development, but only recently have been exposed to English, a third may have an IQ below 80, a fourth may have ADD, a fifth may be dyspraxic, a sixth may have suffered a birth trauma, and yet all of them may have the same proximal cause: lack of phonological awareness which has made it hard for them to learn to read and spell. Thirdly, proximal influences are amenable to intervention and phonological awareness, letter-sound correspondence knowledge, sight vocabulary etc, can be taught. Once they become the focus of intervention, the student's difficulties may be ameliorated.

Returning to the questions of what dyslexia is and what information we need to collect at screening, and using the proximal/distal classification system, the way to screen for dyslexia is to use normative tests to profile the student's strengths and weaknesses in accessing the different subsystems that make up the reading process: letter knowledge, word-knowledge, letter-sound correspondence etc. (Coltheart and Jackson, 1988). This allows for the identification of the proximal causes of the reading difficulty which can be further explored at the diagnostic analysis which should also ascertain whether the student is phonological-dyslexic or surface-dyslexic (Castles and Coltheart, 1993). Weakness in any of the reading subsystems detected at screening or diagnostic analysis should indicate the focus of intervention for students at school and the parameters of the Needs Analysis for students in HE.

In addition, the screening should probe for further distal influences such as whether the reading difficulty is oculomotor (Stein, Fowler and Richardson, 2000) or due to poor control of vergence eye movements (Lovegrove, Martin & Slaghuys, 1986). The screening should also explore distal

internal environmental influences on dyslexia at the *biological* level, through questionnaires or interviews that provide the opportunity for self-reported evidence of an inherited predisposition to reading difficulties which could account for left temporal lobe abnormalities, or even brain damage to these areas. Language development should be interrogated at screening, and language delay in general should be considered as a biological cause of dyslexia, at the internal environmental level. Late acquisition of English should be considered as an external environmental cause of dyslexia, to be followed up at the diagnostic assessment.

These issues form the backdrop to the screening of AN.

BACKGROUND INFORMATION

AN, a 41-year old male, was born in Iran and came to England 7 years ago. His first language was Kurdish and he was educated in Parsi. He learnt to read English, when he was 34 years old, at the same time as he started College in the UK. Before that he had studied English as a foreign language for a short period at school.

AN recalled no difficulties learning to read or write in Parsi which is far more orthographically regular than English, but he was experiencing huge difficulties with English. Despite having obtained a Science degree in Iran, he was struggling to keep up with the reading and writing required for the Master's degree for which he was currently studying. Consequently, he felt extremely worried and approached the Disability Office at his college, requesting an assessment for dyslexia. He had had a previous assessment, while taking an Access course, but had never obtained support.

BEHAVIOURAL LEVEL

AN reported difficulties with reading, spelling and handwriting which made understanding of course content difficult.

Reading. He mentioned that his reading was accurate, but slow, that he could not skim or scan, that his comprehension of print was poor, and that he could only understand text if he read and reread it several times. He mentioned losing his place when reading and that he sometimes read numbers and words back to front. When reading silently, he often misread one word as another. When reading orally, he mispronounced the words.

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As a result of his slow rate of reading he was unable to complete all the reading required for assignments and often handed in work that was not to his satisfaction.

Spelling and Writing. AN reported finding English spelling difficult and that in order to maintain spelling accuracy he needed to decrease his writing rate. This hindered notetaking during lectures and completing written assignments. Proofreading was another problem, and he found it extremely difficult to correct his spelling. When writing he often left words out. He had difficulty determining what was relevant, and structuring his work.

He mentioned that he had not encountered these difficulties when studying and writing in Parsi.

DISTAL CAUSES

Biological Level

Perinatal. AN was not aware of any birth or postnatal complications, or of having any relatives who were dyslexic thus ruling out an explanation of dyslexia at the biological level, or internal genetic factors.

Visual. Other distal causes of reading difficulties mentioned by AN and explored at the screening interview were his use of spectacles for reading, and the visual discomfort he reported: he preferred reading in dim rather than in bright light, and mentioned that white paper or a whiteboard sometimes seemed to glare. Importantly, AN reported that he had not encountered any of these problems when reading Parsi.

Aural. AN reported that his listening skills in English, were poor, and that this contrasted with his ability to listen in either Kurdish or Parsi.

Oral. AN reported that he was not confident of his abilities to present materials to others in seminars or discussions. Primarily this was because of the difficulties he had in English, finding the right word, mispronouncing words, and being able to maintain a logical structure. He could not recall experiencing similar difficulties in Parsi.

Cognitive. AN reported difficulties with memory and concentration. He felt that his short-term memory, in particular, had deteriorated. Not being able to encode new information left him feeling very anxious about his studies and seemed to block his ability to learn. Concentration was also difficult when, in addition to attending to content he had also to cope with reading in a language in which he was not properly fluent. These self-reported difficulties indicated that a proximal cause of his difficulties may be at the cognitive level and involve memory.

Summary. The background history indicated that one of the external biological factors contributing to AN's difficulties may have been his late acquisition of English. Poor memory and concentration may have caused reading difficulties at the distal-cognitive level. The purpose of the screening was to examine in greater depth the possible proximal causes of his reading difficulties at the cognitive level.

CURRENT ASSESSMENT

Test results are shown in table 1.

Table 1.

RESULTS OF ASSESSMENT		
Test Name	Standard Score	Percentile
Test of Word Recognition Efficiency (TOWRE)		
• Overall	65	1
• Sight Word Efficiency	70	1
• Phonemic Decoding Efficiency	72	1
Wide Range Achievement Test 3 (WRAT 3)		
Reading	76	5
Spelling	78	7
Digit Span Memory Test		
Forwards = 5	82	12
Backwards = 3		
British Picture Vocabulary Test (BPVS)	59	<1

INTERPRETATION OF RESULTS

Cognitive Assessment of Memory: Digit Span. His immediate memory span was in the below average range. This is a distal pointer to dyslexia at the cognitive level.

Reading Speed and Accuracy. AN's reading speed and accuracy were both in the poor range. This is a positive indication of dyslexia at the behavioural level in people who are reading in their first language. AN was particularly poor at reading nonwords aloud on the TOWRE. Inadequate knowledge of grapheme-phoneme correspondences necessary for reading such items is a proximal cause of dyslexia at the cognitive level.

Spelling. His spelling was in the poor range, another behavioural indicator of dyslexia.

Vocabulary. AN was tested on the *British Picture Vocabulary Test*, a measure of receptive language. Because the same word meaning system is used for understanding spoken and printed words, restricted vocabulary is a proximal cause of dyslexia. He heard a word being read to him, and then had to point to one of four pictures that best expressed the word's meaning. His score on this task was in the very poor range and the level at which he understood word meaning, in English, was at the level of 8-9-year-old children.

Vinegrad Checklist. He identified 9 of the 12 most defining signs of dyslexia such as making mistakes when writing cheques, getting numbers mixed up when using the telephone, having poor spelling, taking a long time to read a page from a book, etc.

IMPLICATIONS

The *Vinegrad* checklist is useful for describing reading and writing difficulties at the *behavioural* level, but did little to address the question of whether AN was dyslexic. The assessment revealed extremely slow *and* inaccurate reading



Table 2.

ANALYSIS OF AN'S READING ERRORS				
Word	Response	Phonologically Plausible	Phonologically Implausible	Other
Sour	Saw	✓		Ps ¹
Urge	Erch	✓		Ps
Deny	Denny	✓		Ps
Quarantine	Quatrain	✓		Medial omission
Deteriorate	Ditrorate	✓		Medial error
Mosaic	Mosic	✓		Phoneme omission
Rescinded	Resignded	✓		Ps
Audacious	Eudashus	✓		Ps
Mitosis	Metosis	✓		Ps
Longevity	Soft g	✓		Ps
Regime	Re-gime as in dime	✓		Ps
Beatify	Beautiful		✓	Word substitution
Internecine	Intransin	✓		Ps and omission
Regicidal	Regisidal	✓		Ps
Puerile	Purial	✓		Ps and omission
Lucubration	Luckbrash	✓		Ps and omission
Epithalamion	Epithilimion	✓		Ps
Inefficacious	Infishus	✓		Ps and omission
Synecdoche	Sencode	✓		Ps and omission

Table 3.

ANALYSIS OF AN'S SPELLING ERRORS				
Word	Response	Phonologically Plausible	Orthographically Illegal	Other
Kitchen	Ketchin	✓		G-Ps ²
Purchase	Porches	✓	✗	G-Ps
Institute	Institute	✓		G-Ps
Suggestion	Sugaestion	✓	✗	G-Ps
Museum	Musume	✓		G-Ps
Occupy	Occupiy	✓	✗	G-Ps
Illogical	Elogical	✓		G-Ps
Familiar	Famliar	✓		G-Ps + O ³
Reverence	Reverance	✓		G-Ps
Physician	Physition	✓		G-Ps
Prejudice	Pragedice	✓		G-Ps
Assistance	Assituce	✓		G-Ps
Sovereignty	Saveranty	✓		G-Ps
Irresistible	Irrsistable			G-Ps + O
Occurrence	Accorance	✓		G-Ps
Auricular	Oricular	✓		G-Ps
Imperturbable	Impertabable	✓		G-Ps ?+ O
Boutonniere	Botinae	✓	✗	G-Ps
Mnemonia	Anomonica	✓		G-Ps

Key:

- 1 - Phoneme substitution
- 2 - Grapheme-phoneme substitution
- 3 - Omission of phoneme

which are other behavioural signs indicative of dyslexia. Despite this, and his test performance, several other factors made an unequivocal diagnosis of dyslexia difficult. Firstly, his level of competence in English contrasted with the self-

reported ease with which he coped with written and spoken Parsi. Secondly, the nature of the errors he made when reading and spelling gave pause for thought.



ERROR ANALYSIS

AN's first language, Parsi, is orthographically regular and it is possible to work out a word's pronunciation from its spelling by sounding it out. If AN were using a sounding out decoding strategy he would be able to read accurately, if slowly, in Parsi. If he applied the same strategy to reading English, he would make errors on irregularly spelt words, like DENY, or long regular words with irregular 'bits', such as REGICIDAL. The errors would indicate an attempt to 'regularise' irregular spellings, and are characteristic of 'surface dyslexia' which is less noticeable in orthographically regular language like Parsi, Italian, Finnish, Zulu, etc than in English.

Reading

AN's reading errors on the WRAT 3 were inspected to see if they were phonetically plausible or implausible. He made errors on 19 of the words (45%). The results of the error analysis are shown in table 2.

All except one of his errors (beautiful) involved phoneme substitution, and of these 18 errors, 7 also involved omission of a phoneme or phonemes. These 18 errors are examples of the 'regularisation' errors, describe above, the clearest example being DENY rendered as 'denny'.

Spelling

There is usually a high correlation between reading and spelling. AN's spelling errors on the WRAT3 are shown in table 3. He made errors on 19 of the words (48%). The errors were inspected to see if they were phonetically plausible or orthographically illegal.

Good spelling requires the student to have a stored visual memory of what the word looks like, and the sequence of its letters. English gives rise to spelling problems if the student tries to spell by ear because no vowel sound in English corresponds to a single letter. Even the 'a' sound in *plan* can be written in three different ways, in different words, and there are some sounds that can be written in more than 20 different ways. During the initial stages of learning to spell it helps if the student is able to segment the word and then to apply letters to sounds. Initially, the most common spelling pattern is usually employed to represent the heard sound. Students who have been taught spelling rules will spell in a manner that is phonetically accurate, even if the word looks wrong. A student who spells by such a strategy may misspell 'hail' as *hale*. The student who cannot segment the heard word will not spell phonetically and will make errors that are difficult to decipher, possibly spelling 'hail' as *hal* or even *bl*. Finally students need to learn that particular spellings belong to specific words. A student who spells 'four' correctly, in the context of number, has such knowledge; a student who spells it as *for* or *fore* does not.

Only 4 of AN's errors were orthographically illegal, and most involved grapheme-phoneme substitutions. This indicated firstly that while listening to the word he recoded it phonologically in a slightly different way, and then spelt according to his own recollection, and secondly, that he is not aware of how to represent certain phonemes as graphemes. His spelling of 'kitchen' as KETCHEN indicated that he used his

own internal representation of the word to spell it and that he has difficulty knowing how to spell the /i/ sound. Other errors indicated that there are several sounds he does not know how to spell.

CONCLUSION

Screening EAL students for dyslexia and deciding whether to send them for diagnostic assessment is difficult. Ideally one would wish for the student to be assessed in both languages. In this case study an alternative approach has been described, using the dual route model of reading suggested by Coltheart *et al.* (2001) as a theoretical framework. The screening provided behavioural evidence of slow and inaccurate reading and poor spelling but no evidence of internal environmental factors having a distal influence on his reading. The results of the BPVS confirmed that restricted English vocabulary could be a distal influence and an external environmental cause while poor working memory might influence reading by affecting attention and concentration.

In order to establish what the more likely proximal causes of his reading difficulties were, AN's reading errors were inspected to ascertain whether they indicated that he was reading nonlexically, by decoding words according to their spelling, or lexically, by reading them as wholes. Phonological plausible regularisation errors were taken as an indication of nonlexical reading, and all except one of AN's errors fell into this category. It is likely that this was the strategy that he had used to read his native Parsi but that it had not affected his understanding of Parsi adversely because that language is orthographically regular and thus suited to a decoding strategy. Given the close correlation between reading and spelling, it was not surprising that almost all of his spelling errors were also phonetically plausible.

AN was justifiably concerned about his academic work and having been admitted to the course was entitled to support commensurate with his needs. In order to support him in the first instance, training to improve his grasp of aural and oral English was recommended. At the same time his reading and writing needs were to be addressed. A study skills course was recommended to enable him to understand his difficulties and to develop strategies for increasing his reading speed and improving his knowledge of English grammar, punctuation and spelling. It was suggested that he return for a further assessment, to evaluate progress, after 6 months of study skills training. At that stage his reading errors would again be inspected to evaluate whether they had reduced in quantity or changed in nature.

In the meantime it was recommended that he be given extra time during examinations and that he approach his College's counselling service for support to reduce his anxieties.

Dr Estelle Doctor

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Dyslexia and the Primary National Strategy

Primary

JEAN GROSS

The government's Primary National Strategy, developed from its predecessors the National Literacy and Numeracy Strategies, has now been in place for two years. Although the ambitious government 'targets' for the number of children reaching demanding levels of literacy and numeracy by the time they are eleven have not yet been met, the Strategies are judged to have improved the quality of teaching and had a significant effect on standards. It seems a good time, then, to take stock of their impact on dyslexic children and consider what more needs to be done.

The design of the literacy hour and daily mathematics lesson had from the start some clear potential benefits for dyslexic children. In mathematics, for example, many children have benefited from the move away from memorising number facts by rote, towards the use of mental strategies. Children are encouraged to start from facts they do know to work out those they don't – that the five times table can be worked out, for example, by halving the ten times table, or that $9 + 6$ is 'nearly' $10 + 6$ so 16 count back 1.

In literacy, the opportunities for 'shared reading', when the whole class is led by their teacher (whose role is to model and demonstrate key reading strategies) in reading and discussing stories, poems or non-fiction texts together, has enabled dyslexic children to engage with texts that may be beyond their independent reading level, but are actually at an appropriate level of challenge and interest. During adult-led guided reading sessions they will be supported both by adults and peers in engaging with texts matched to their own reading level. The greatly increased emphasis on teaching phonics has helped to address what is often a fundamental weakness for many dyslexic learners. Much of the guidance and training on teaching spelling from the National Literacy Strategy drew from the start on the work of experts in teaching children who do not seem to 'catch' spelling in the way that others do: finding and analysing the tricky part of words, teaching spelling patterns and rules and using mnemonics are now an established part of mainstream teaching.

Despite advances like these, the pace of literacy and mathematics lessons, and the emphasis on keeping as many children as possible working on the same learning objectives, can sometimes leave dyslexic children behind. Many children do still experience difficulties, and the Primary National Strategy is determined to work with schools and local authorities (LAs) to ensure that the best possible provision is made to meet their needs.

EARLY PREVENTION

The work we want to do has three key strands. One could be called 'early prevention'. As all dyslexia experts know,

difficulties in phonological processing lie at the heart of dyslexic learners' struggle with reading and spelling. We need to make sure that teachers and practitioners working with children in the Foundation Stage are able to identify children with such difficulties, and put in extra support with segmenting and blending the sounds in spoken words alongside very systematic teaching of phoneme-grapheme links. The Primary Strategy's Playing with Sounds materials (DfES 0280-2004), provide support for practitioners through a set of simple screening tools and guidance on the extra help that may be needed – opportunities for the child to take part in the same activities as the rest of the group but in a quiet setting away from distractions, with the activities happening on a table top right in front of them in a 'hands on' way using plastic letters, objects, pictures and writing materials.

EARLY INTERVENTION

The second key message in our work with LAs and schools is about the absolute need to provide systematic intervention, from Y1 onwards, for all children for whom everyday high-quality classroom literacy teaching has not proved sufficient to enable them to reach the standards expected of children their age. We have followed up our guidance to schools (*Targeting support: choosing and implementing interventions for children with significant literacy difficulties* (DfES 0201-2003)) with materials for LA staff to use with school leadership teams, focusing on the effective management of intervention programmes. The key messages are that headteachers, school literacy and mathematics coordinators and SENCOs need to work together to:

- put in place effective systems to track individual children's progress carefully against local and national comparators, and identify at the earliest opportunity all those who need additional support;
- choose and use literacy interventions that have proven impact, drawing on the research the DfES has published in this area (*What works for children with literacy difficulties* (DfES Research Report 380));
- make sure that literacy interventions are matched to children's needs and delivered by skilled, trained staff;
- routinely evaluate the impact of these interventions, to make sure that they are, on average, at least doubling the normal rate of progress (that is, achieving at least two months' gain in reading or spelling age for every one month in which a child takes part in the intervention).



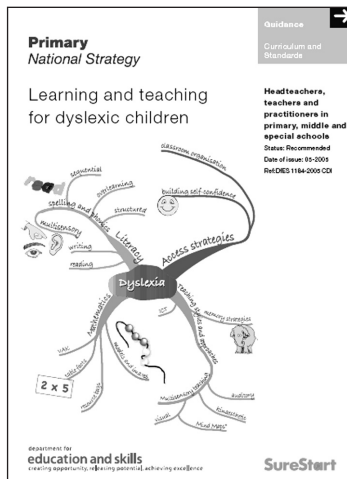
Those working with dyslexic children may also be interested in some new Primary National Strategy teaching materials aimed at children who have difficulties with mathematics. Called *Supporting children with gaps in their mathematical understanding* (DfES1168-2005), these materials are not a ‘programme’ but short sequences of activities that each address a particular gap or misunderstanding the child may have – about place value or counting, for example. Teachers identify children’s gaps or misunderstandings in the course of everyday teaching and assessment. They then choose the sequence of activities that will tackle the gap. The teacher uses this set of activities to do a piece of focused work with the child which is then followed up in short but regular sessions with either a teacher or a teaching assistant, designed to reinforce what has been taught. At the end of the sequence of activities is a concluding session supporting assessment of progress. Many of the activities tackle areas of difficulty commonly associated with dyslexia, such as sequencing numbers or rote recall of number facts and tables.

DYSLEXIA FRIENDLY CLASSROOMS

The third area of work for us is in increasing teachers’ understanding of dyslexia and its implications for teaching and learning across the curriculum, so that they can provide the kind of overall learning environment that enables dyslexic learners to succeed.

To achieve this, we have recently made available a CD-ROM *Learning and teaching for dyslexic children* (DfES 1184/2005 G) that provides resources for school-based whole staff professional development.

The materials were scoped in partnership with the Dyslexia Institute and BDA. They have been written by Lindsay Peer (well known to everyone in the dyslexia field) together with local authority Primary Strategy literacy and mathematics consultants. They present the essentially positive message of dyslexia as a learning difference that only becomes a disability if we fail to adapt the way we teach and the way we organise our classrooms to accommodate the learning styles of children with diverse needs.



Teachers are encouraged through the materials to use everyday ‘assessment for learning’ to identify dyslexia, and then to take immediate action, rather than refer for assessment by outside experts and wait for a ‘label’. They are asked to draw on assessment methods already familiar to them, for example:

- National Curriculum assessment profiles – looking out for strengths in some subjects (including Speaking and Listening), weaknesses in Reading, Writing and often in Numbers and the Number system and Calculation.
- Achievement of curricular targets – being alert to

particular difficulties with class or group curricular targets involving spelling, sequencing skills or rote recall. Examples might be curricular targets in class to ‘understand how to use alphabetically ordered texts to retrieve information’, ‘order 3-digit numbers in ascending/descending order’ or ‘use known facts and place value to consolidate mental division’.

- Day-to-day assessment in class – observations of responses to questions and oral discussion that show greater understanding than is evident in written work; observations that show the child struggling to hold facts in mind when they work on a multi-step problem; responses to questions in word level work that show difficulty in analysing and synthesising the sounds in spoken words; observations that show the child having difficulty in remembering instructions and organising themselves for learning; discussions with the child about what they are finding easy and difficult in their learning.
- Marking children’s work – looking out for letter reversals, spelling a word in several different ways in one piece of writing, unusual spellings that bear little relationship to the sounds in the word or are heavily phonetic.

Having identified children who may be dyslexic through this classroom-based assessment, teachers are then encouraged to focus on ways in which their everyday teaching can enable them to succeed. They explore video and audio case studies of dyslexia-friendly classrooms, for example listening to one teacher talk about how she uses mind-mapping and post-its as alternatives to conventional written recording with her class.

There is an activity where staff look at a plan of the layout in this teacher’s classroom, then draw their own classroom, labelling anything that is dyslexia-friendly at the moment and adding new ideas that they might try out. They are introduced to helpful resources such as timetable icons (for visual timetables), a writing mat template, lists of common words, alphabet arcs, a ‘What to do if I can’t spell a word’ poster and so on.

This is followed by useful video on how to construct a curriculum that boosts confidence by giving every child a chance to shine in at least one area.

There are then sections on the use of multisensory learning, mind-mapping, memory strategies and the latest uses of ICT (including interactive whiteboards) as a powerful tool that:

- provides visual support for the teacher’s explanations and key vocabulary;
- encourages the use of multisensory approaches – for example using digital images and sound to stimulate and extend writing;
- provides a variety of ways in which children can record their work – for example, digital cameras, multimedia presentations;
- allows children who do not process information in linear, sequential ways to read non-linear texts.

Finally, sessions on literacy and mathematics describe practical ways in which the literacy hour and daily mathematics lesson



can be made accessible for dyslexic learners.

We hope that many schools will order these new materials and find time to use them in staff meetings and INSET days. The aim is that schools engage in the kind of shared professional development we know to be effective in changing practice – one in which teachers and other practitioners explore new ideas together, then go away to try them out on their own classrooms, returning after a period to talk about what

worked, what they learned, and what they see as the next steps.

Jean Gross

Jean Gross is a Senior Director in the Primary National Strategy, responsible for its work on inclusion.

All the publications mentioned in this article are available from DfES Publications, tel: 0845 60 222 60.

Dyslexia and the Language of Mathematics

JOHN WEAVERS

Mathematics

It is now fully recognized that many people with dyslexia have difficulties in a wide area of Mathematics. Here, John Weavers from East Court school briefly reviews these problems and shares his observations and the difficulties faced by his pupils, particularly when trying to grasp the new 'language of Mathematics'.

It is estimated from initial research carried out by Joffe (1983), Henderson (1998) and Miles and Miles (2002) that up to 60% of dyslexic children will also have difficulties in understanding mathematical concepts and learning computational skills to a greater or lesser degree.

The term 'dyscalculia' is often used to describe this condition which affects the child's ability to grasp computational skills, and despite normal intelligence, will create difficulties in reasoning and the understanding of the basic mathematical concepts. I will use the term as a shorthand for the varied arithmetical, mathematical and computational problems associated with dyslexia and which are described below. Although dyscalculia can occur independently from dyslexic difficulties, our experience is of a large overlap. We too find approximately 60% of our children have difficulties in mathematics.

Mathematics is a subject of great diversity, covering topics of size, time, shape and space; however all the facets of the subject require a sound foundation of basic arithmetical skills. A lack of these skills is not only going to hinder one's progress in this subject alone but also in all areas of the curriculum. It will be a hindrance to personal progress and an embarrassment in adult life. Facing up to the problem is essential, for with understanding and with good teaching, a lot can be achieved. We no longer should accept the statement from personalities in the public eye, 'Well I was never much good at maths when I was at school,' as if it were 'not cool' to be too good at the subject!

UNDERSTANDING THE PROBLEM

It is generally accepted that many of the underlying cognitive difficulties that affect a child with dyslexia will also be the core factors affecting their progress in mathematics.

These difficulties can be classified as follows. I list them briefly below and shall then consider each in greater detail, so that a clearer knowledge and better understanding of these factors will help us to empathise with the difficulties faced by a child with dyscalculia, and subsequently enable us to offer help more sympathetically and more successfully.

- Maths is a new language to many children with new words, signs and symbols to be learnt. There is a lot of duplication and ambiguity of meaning to come to terms with at all levels. For a child with a low reading attainment ability the prospect can be daunting.
- Left-right orientation weaknesses may cause difficulties – having been struggling to read from left to right, we confront them with working down the page in columns or from right to left.
- Sequencing and logical progression when looking for patterns and procedures for setting out work is often weak, especially when one considers that maths requires a lot of abstract thinking, and putting it down on paper is difficult.
- Short term and working memory difficulties are a problem for most, if not all, dyslexic children. Maths is a subject that relies heavily on previously learnt work before progression to the next step is undertaken. This tiered approach is a major problem for those with a poor memory. Many pupils will also copy incorrectly or forget the end objective of a problem being tackled.
- Long-term memory (or possibly transfer from working memory into long-term memory) is a handicap in many areas of the subject whether it be in the inability to learn one's number bonds and master the multiplication tables, or the inability to remember formulae required for more complex work.
- Slow processing speed. Not only may a child be inherently working at a slower pace and needing more practice and reinforcement, but the speed of the lesson designed for the



non-dyslexic will leave them further behind, thus compounding the problem.

- Poor spatial awareness and perceptual skills. Difficulty will be experienced in interpreting diagrams and charts correctly, or problems will be experienced when filling in data or copying from the board or another page. Signs and symbols will be confused and misinterpreted.
- Weak conceptual ability. Mathematics is best learnt by understanding concepts – why we do certain things in a certain way. This knowledge is often weak in the case of a dyslexic child who may be reinforcing their skills through repetition and drill, thus limiting their experiences and understanding.
- A clash of mathematical learning profiles. Mathematics can be tackled and understood in different ways. It is particularly important with dyslexic children that the teacher or tutor recognises their own cognitive learning style, ie whether they have developed their knowledge of the subject through rote or conceptual understanding. Different children will succeed in different ways and it is important that a tutor teaches to suit the learning profile of the child.

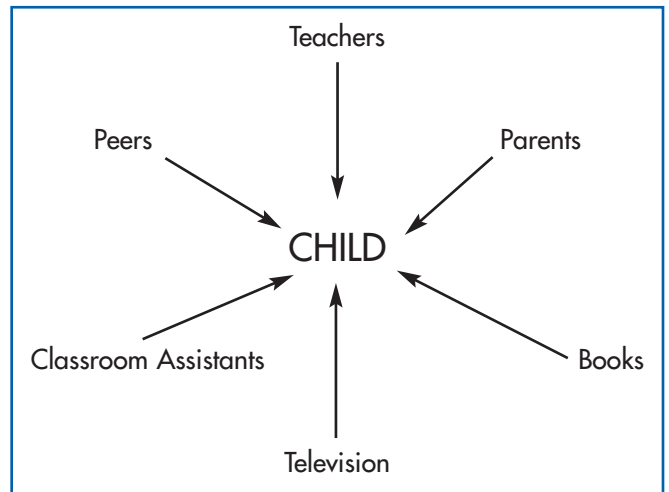
In this article I wish to focus on this new Language of Mathematics.

I consider that mathematics should indeed be treated as a new language for all children. There are numerous mathematically specific words to learn and understand the meaning of. There are signs, symbols and abbreviations to come to terms with and formulae to comprehend. We must not assume that even the good reader will have no problems in reading and understanding mathematical text. The text may not always be as clear and simple as it could be; many of the words will be new to the children and there will be considerable ambiguity or duplication of meaning. Many words or symbols can be used to mean the same thing, or one word could in itself have many meanings.

Children whose mathematical capabilities and potential might be of a good standard may well have their confidence and self-esteem shattered at this stage. They will need a lot of guidance, support and understanding to overcome this major hurdle of language, or the result will be increased frustration and despair and any early success will be lost. It is interesting to note that research into mathematical attainment in other countries shows that where the mathematical language is simple and less ambiguous, (eg Japan), the level of children's attainment can be advanced by over a year.

It is important that we reduce the problem of language as much as possible at its source. A child may be receiving mathematical language input from a variety of different sources (see illustration opposite).

Our first priority is that of continuity. We must endeavour to formulate between these factions a common mathematical vocabulary to suit the attainment level of the child. This is particularly important between teachers, classroom assistants and hopefully parents. We must ensure that this continuity is the same within parallel classes and should develop in phases as the child progresses through the school. We will look again



at this background of continuity of approach to avoid confusion, for it is important that we all adopt the same techniques for arithmetical layout and calculation, and to a lesser degree, problem solving.

Let us consider the basic symbols, terms and phrases that confront a child, and let us not assume that they will automatically link them together, for there are often many expressions that all have the same meaning.

- + add, total, sum of, plus, and, altogether, addition, more than, positive.
- subtract, take away, minus, difference between, less, smaller than, negative.
- × (often confused with +), times, multiply, product of, lots of.
- ÷ divide, share, how many in, how much each, quotient.
- = equals, becomes, is the same as, makes.
- > greater than and < less than are often confused.

To overcome this overload of input it is advisable, wherever possible, to introduce only a few words at a time until they have been learnt and their meanings understood. The latter being particularly important, for example the use of the word 'times' will result in one of two calculations depending on its context in the sentence. For example: (i) 'What is 15 times 3?' Or (ii) 'How many times does 3 go into 15?' When used in the context of a problem it can be even more confusing eg 'Dad is 40, his son is 8, how many times older is the Father?' Obviously not 320! Yet a child who has become 'command specific' when seeing the word 'times' will indeed 'times' 40 and 8. It all boils down to understanding the meaning of the sentence. (It does not help either that 'Dad' has been replaced with the word 'Father' within the sentence!) We must of course encourage pupils to ask themselves, 'Is my answer sensible?' thus linking understanding with the idea of estimation and approximation at an early stage.

Another common source of error and misunderstanding which we need to be aware of, is the use of the word 'more', for example: (i) 'What is 10 more than 50?' Or (ii) 'How many more than 10 is 50?' One question implies addition, the other subtraction. To add even further confusion we might even ask



the question, 'How many times more is 50 than 10?' and we begin to get an idea of the frustration and despair felt by many of our dyslexic children!

One strategy that does seem to help many children when faced with such questions is to get them to ask themselves the question, 'Do I expect the answer to be bigger or smaller than what I started with?' If they can answer this question correctly it will help their progress by narrowing the procedure down to either a possible *add/multiply*, or a *subtract/divide* response, from whence a little careful reasoning will help them to make the correct choice. We must carefully cultivate this idea of a 'reasoned response' against the notion of a 'word command'.

The notion of size and value is often a concept difficult for some of our children to grasp, for we use the ambiguous words 'bigger' and 'smaller' to express both of these meanings. This is clearly illustrated by asking the question, 'Which is the bigger number, 5 or 3?' Do we mean bigger in size or value?

Later in their schooling confusion persists when we consider decimals and place value eg (i) 'Which is bigger 5.3 or 35?' or (ii) '1.35 or 35?'

There are numerous examples of ambiguity in the English language that affect the young mathematician, thus causing understandable confusion and anxiety. Take, for example, the word 'volume'. We might be referring to the volume of a box or a room, or to the volume being too loud on their CD player. We might ask a group to 'keep the volume down'. Another example would be in the use of the word 'face'. We talk of someone having a dirty face, and we tell them to 'face the front and look at the face of the clock,' or to count the faces on a tetrahedron. For many children it is expecting a lot of them not to show some confusion!

Confusion is compounded when we consider that in addition to decoding the meaning of words in the correct context, and decoding symbols, we then introduce abbreviations for children to grapple with. These have to be decoded and then understood. Take, as an example, Lowest Common Multiple (LCM) and Highest Common Factor (HCF). Firstly, a child has to remember what each letter stands for, secondly, understand the meaning of each word, and thirdly, the meaning of the phrase. If we were to ask a pupil for the LCM of 12 and 15, further confusion arises, because the first word 'lowest' forms a mental image of something small – they anticipate a small answer and often the meaning of multiple is overlooked as it is at the end, consequently we get the wrong answer 3. The same applies with HCF; 'highest' triggers off a big answer image and we are given the answer 60, the words 'multiple' and 'factor' being overlooked and confused. Perhaps it would be kinder to reverse the letters and ask for the MCL or the FCH. so that the first mental image would focus on the words 'multiple' and 'factor'. The thought process would then be 'I want a multiple that is common to both and is the lowest possible' and we arrive at the correct answer 60. Similarly, I want a factor common to both that is the highest possible.

Another example of the reversing of information which causes major problems is the way in which we tell the time. If we were all consistent in the way we interpreted a clock face the problem would be greatly reduced, but when the time is 2:40 how many of us say '20 to 3'?

So, the child with dyscalculia is faced with the problem of maths being a new language before he or she even thinks about solving problems and doing sums (note the word 'sum' is also used to mean addition!)

Our first task is to ensure that we know the reading ability of the pupils in our care, and target written work and questions at the correct level. Questions should not be excessively long, as a child with a combined poor memory and low reading score will have forgotten the beginning of the sentence before he/she reaches the end. Secondly, we must avoid overloading by not introducing too many new signs, symbols, abbreviations, words and phrases in one go, particularly those with ambiguous meanings. The introduction of the metric system in itself may be simple to understand and manipulate, but only after a vast number of similar sounding words have been learnt. To make matters doubly difficult, we are still operating a dual system with 'pints' being sold, and signposts giving distances in miles. If you ask children themselves how tall they are and how much they weigh, nine out of ten will give you a reply in feet and inches, and stones and pounds. We need to help children to become familiar with this new mathematical language by highlighting or underlining the important new words to be learnt as they appear in text. Their correct meanings can be compiled, which can then be easily discussed and referred to, thus reinforcing understanding and spelling.

I believe that being aware of the confusion with language faced by dyslexic children trying to cope with mathematics is the first step in giving them any chance of success in this subject.

John Weavers

John Weavers is a mathematics teacher at East Court school and with colleagues has been instrumental in developing a mathematics curriculum specifically for dyslexic children. John regularly lectures on INSET courses and conferences nationally.

The above article forms the first part of a chapter on 'Dyslexia and Mathematics' from the book 'Dyslexia Included' written by staff at East Court school and edited by Michael Thomson.

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Women and Dyslexia in Higher Education

BARBARA TULL

INTRODUCTION

As a learning support tutor, I constantly evaluate my performance to establish the effectiveness, or otherwise, of 1:1 sessions with dyslexic students, and I have become aware that there is a subtle difference in both my approach and the techniques I use when working with female dyslexic students. This study was an attempt to identify these differences, and the reasons for them. It explored the particular ethnography of dyslexic female students that impacts on 1:1 learning support tutorials and attempted to identify some of the key issues for these women in higher education and how these can impact on their learning and produce physiological, psychological and behavioural signs of stress and anger diversion. The aim was to gain a better understanding of the mechanisms by which these students achieve and sustain interaction within 1:1 learning support tutorials. Data was gathered from a discussion group (made up of both undergraduates and post-graduates) that met to investigate key issues for female dyslexic students at university and this provided illustration on not just dyslexic coping strategies, but also those that are gender specific.

One reason for focusing on women in this study was that assessment and teaching strategies for dyslexics have been 'tuned to identify the pattern of difficulties of male dyslexics' (Smythe 2000) because the traditional assumption has always been that there were many more males than females who were dyslexic. However, there is a growing body of research that challenges this assumption and maintains that in fact there is an equal gender split (Shaywitz 1990 and 2001, Young, Glenn 2000) and this is now accepted by the International Dyslexia Association. This would appear to be substantiated by the growing numbers of female dyslexics identifying themselves on UCAS forms or subsequently turning up at learning support centres requesting formal identification following university entrance.

BACKGROUND

Data from both the Higher Education Statistics Agency (HESA) and universities in the South West were used to show how the female numbers compared to the male, and whether they reflected those allegedly found in the general population. A learning support service that is chiefly geared, albeit unconsciously, to supporting male clients may need to rethink the delivery of its service if that clientele is shown to consist of a different gender mix, with different support needs.

Statistics available from HESA detailing the numbers of dyslexics in HE are based on universities' returns declaring their numbers of known disabled students. It is interesting to note that between the years 1994/5 and 2000/1 there was a 342% increase in the number of dyslexic students so identified in HE institutions (from 2,359 to 10,430). The Disability Discrimination Act (1995) and Government policy regarding widening participation are likely to have been major factors in enabling dyslexic access into HE, and this is reflected in the rising numbers of dyslexics in HE from 2000 onwards.

Of particular interest in the HESA data is the gender split that shows numbers of female students with dyslexia ranging from 39.29% to 58.3%, with higher numbers registering on part time courses. If these figures were to reflect the 4:1 hypothesis then the percentage for female students should show up at no more than 25%, but even on 'Research For a Higher Degree' courses, where the figure is lowest of all, it still registers at 39.29%.

It could be argued that the issues that are of concern to dyslexic students at university will be the same, whether they are male or female. In some respects this is true – classic dyslexic difficulties (eg poor short term memory and organisational skills) can equally cause havoc to both sexes.

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However, my main contention is that there are gender specific cognitive processes and behaviour, underlying the dyslexic characteristics, that need to be taken into account when learning support tutors are working with female dyslexic students in an HE environment. There is little or no published literature that addresses gender specific issues in dyslexia (although more mention is now made of the experiences of females) and mainstream thinking very much holds to the 4:1 hypothesis.

Current working practices within many universities follow an established pattern based on traditional methods of working with school age dyslexics. The appropriateness or otherwise of these techniques will not be addressed here, but what is significant is that teaching methods for dyslexic students were developed to address typical dyslexic male difficulties, because dyslexia was thought to be mainly a difficulty 'suffered' by males. These strategies had in turn been based upon weaknesses defined in the profile produced by the assessment process. However, as Gilligan (1982) pointed out, there are gender specific ways of experiencing the world, and there are alternative ways of interpreting those experiences. The way dyslexia is diagnosed can influence the reported sex ratio – it has been claimed by Smythe (2003) that measures used by psychologists to identify dyslexia have been 'tuned to identify the pattern of difficulties typical of male dyslexics': 'if the referral bias hypothesis proves correct and many female dyslexics are indeed "slipping through the net", current diagnostic procedures will require modification in order to increase their sensitivity to the female dyslexic. It has even been suggested that separate diagnostic criteria are established for males and females'. (Smythe 2000 p. 86/2003)

In order to develop a better understanding of the issues affecting dyslexic women in higher education, I organised a small discussion group and invited a combination of undergraduate and post graduate dyslexic women to discuss what were/had been the key factors for them in higher education. Four main areas of focus arose from this discussion:

- self-esteem
- coping strategies
- self-control
- motivation

These were studied both from the perspectives of the individual and also relevant research that could possibly shed light on the topics raised.

SELF-ESTEEM

Self-esteem is one area where females generally differ from males (Gross 1987), and certainly with the discussion group this appears to be an area where, despite their obvious intelligence and considerable academic and other personal achievements, they appear to be quite weak.

There is evidence that, particularly during adolescence, girls view themselves more negatively than boys and manifest more depression and poorer emotional well-being (Ebata 1987) that, continuing into adulthood, can often develop into more serious problems. Harris, Blum and Resnick (1991) (cited in Cox, Stabb & Bruckner (1999)) 'found girls to display a

picture of "quiet disturbance"; they found that whilst boys' difficulties materialised in the form of fighting, vandalism and substance abuse, the girls demonstrated a tendency to internalise distress with more incidents of eating disorders, depression and suicidality.' Incidents of severe eating disorders are on the increase at the university where I work, and one of the learning support team now specialises in working with these particular students, who are all women. Depression affects both male and female students of course, but women are twice as likely to suffer from serious depressive episodes (Westbrook 1999). Very poor self esteem may tip over into depression, particularly when individuals are under pressure to perform academically, and it could be that depressive states in female dyslexic students are being overlooked.

The cost of the effort to achieve academically had come at a high price, both physically and emotionally for many of the women in the discussion group, even to the extent where someone wondered whether she had a 'character flaw'. Although previously describing herself proudly as having been identified as a 'high functioning dyslexic', she reported that she was, 'crap at relationships' and 'pretty shoddy in every other department'. This description, however, in no way reflects her remarkable academic achievements at both undergraduate and post graduate level.

COPING STRATEGIES

The coping strategies mentioned by members of the discussion group related particularly to how they were able to obtain the support that they needed. How people perceive and give support was very important because, 'there may be coded ways of doing it across the genders' (Chubb 2005), but it would appear that there can also be a cultural element that has an impact that should be considered. This can be illustrated by an overseas participant, who appeared to be the exception in the group with regard to expression of anger as she feels free to express it quite openly and on a frequent basis. It focuses attention on her and ensures that other issues are sidelined until hers have been dealt with. Cox et al. (1999) point out that the reactions to women's anger in some cultures is very different with women expecting and receiving very different outcomes. Her southern European origin may be responsible for this 'freedom' as Latin temperaments are almost expected to be volatile. Cox et al. (1999) also make the point that equality of economic power leads to increased freedom to express anger, and this may be an additional factor in her case.

Being able to express anger in a safe way, and not bottle it up, is beneficial in a number of ways but particularly with regard to health because: 'Women who express anger freely profit physiologically from it, and women who do not do so suffer some "potentially pathogenic cardiovascular effects" (Faber & Burns 1996 p40). The inclusion of anger work in the services offered by learning support could, therefore, not only help female dyslexic students find a voice to express their needs more effectively but also have a beneficial impact on their emotional, behavioural and physiological well being. Faber & Burns (1996) also noted that the modes of expression women use could further influence their subsequent risk level and in terms of female dyslexic students this could mean reduced likelihood of future 'breakdowns'.



All of the group were able to identify with the need to feel in control of their circumstances so that their dyslexia didn't spiral out of control, and this, in my experience, is a fairly common dyslexic trait. However, the coping mechanisms used by the student in these situations are not always appropriate for their particular learning style and difficulties can arise when they find it difficult to let go of familiar ways of working and try something new.

The need to verbalise problems and discuss the effects of them is a particularly female trait that consumes a large proportion of time in 1:1 learning support tutorials – in my experience more so for women than men who tend to be more solution focused. This discussion can frequently initially be 'one way' when the students appear to need to unburden themselves of all sorts of (sometimes apparently very minor) frustrations, rather than addressing what the tutor sees as the real cause of their difficulties. For dyslexic women who have previously not had the benefit of 1:1 support (eg because of late identification of dyslexia) this process is vital because they need to be able to feel that someone is, at last, taking their concerns, anger and frustration seriously.

The struggle to achieve academically can consume an individual's whole life and there are constant worries that relationships will suffer, not only because of the excessive amount of time spent studying, but also because of guilt at 'using' family, friends and ex-boyfriends to discuss, proof read and compare notes with. Mentors had been used by several of the discussion group participants, but it is interesting to note that one student found discussions 'could be dangerous' because, 'I interpret it this way, someone else will interpret it that way'.

Fink's study (1998) on literacy development in successful men and women with dyslexia identified mentors as having been a critical element in the development of their academic achievements. She found that more men than women (6:1) had been mentored by a close family member – possibly because traditionally there has always been more interest in encouraging male academic achievement.

Finally, with regard to coping strategies, the value of vivas/oral exams was mentioned by two participants, who both felt that this method of assessment allowed them to perform better. However, this method of assessment requires students to hold large amount of facts and figures in their head, which they then need to be able to instantly recall, and for many dyslexics this can be extremely problematic for a number of reasons (Chubb 2005). Also, from the university's viewpoint, vivas are very difficult to mark because of the lack of physical evidence to show that the student has done the research.

SELF CONTROL

Self control is an issue that was particularly sensitive for these women. One particularly reported extraordinary self-control from the age of six when she, 'just worked constantly'. She reports attempting to read the cereal packet at breakfast to improve her reading and then sitting up until 10pm at night to study her times tables, 'just so that I could get five out of 10 the next day'. Research (Kochanska et al. (1996), Diamond (1985, 1988) cited by Baron-Cohen S (2003)) has identified superior self-control in girls, and certainly a very high level of

self-control and determination to succeed was reflected in many of the other women's stories both in the meeting and outside of it, and also the need to prove themselves. As one put it, in her case it wasn't only, 'internal pressure to do well' but also a 'stuff you!' attitude that came as a reaction to those in authority that told her that she should give up. The frustration, helplessness and rage that she had felt, and which she described in 1:1 sessions with myself, however, had not been evident on the surface except for her breakdown shortly after starting her post grad course, and possibly through a previous health crisis when she was studying for an earlier law degree.

In my experience with other female dyslexic students, as well as with this group, there appears to be evidence of self-control in terms of a fairly widespread suppression of anger that appears to have the effect of bypassing the really painful issues. This effectively reduces the student's expectations and creates a type of self-censorship of creative and intellectual potential (Cox, Stabb & Bruckner (1999)).

Self-control was also evidenced within the group in reports of exceptionally long periods of study (eg 9 hours without a break) in order to produce an essay or study for an examination. Again this is typical of dyslexics in HE and is something that can be managed by utilising better organisation, planning and time management techniques.

MOTIVATION

Motivation– the 'why' of these women's behaviour – is in some respects the most fascinating area of this study, because of the extreme lengths some of them have gone to in order to achieve their academic goals in the face of persistent, apparently insurmountable difficulties. It is interesting to note that for two of the students there appears to be a marked difference between themselves and their male siblings in terms of motivation and achievement. For example, in one student's family she was the only one to progress to higher education – the other male, dyslexic siblings had chosen a non-academic route following compulsory education, although this could be due to a number of factors, including attitudes at home generally and the area in which they lived.

CONCLUSION

To conclude, there are several implications, in terms of the delivery of learning support, that arise from this investigation. One of the most important is that, for women, a more conscious focus should be on the emotional element that needs to run alongside study skills in 1:1 dyslexia tutorials. Discussion could enable the communication of this emotion in an holistic way that is particularly appropriate and both dyslexia and gender specific. It is particularly important to recognise that as part of these discussions, the process of building confidence and self-esteem is a critical element for some dyslexic women.

Research indicates there are rising levels of tension, apprehension and anxiety as female dyslexics get older (Hales 1990, 2004). These difficulties are not always apparent on the surface and the internalised distress or 'quiet disturbance' (Cox, Stabb & Bruckner 1999) of childhood could easily transplant to an HE environment and escalate into more



complex difficulties such as depression. However, learning support tutors may need further training in order to deal with these issues, as at present only counselling skills with a small 'c' are practiced. Alternatively, the attachment of fully qualified counselling staff to the dyslexic support unit should be considered.

As learning support tutors, being able to motivate our students is critical if we are to enable them to develop their confidence, self-esteem and the ability to 'build their own bridges' (Coker 2004) into whatever future they have chosen. I do not believe that it is enough simply to say that we work in a dyslexic friendly way, and yet not consciously make allowance for the 'distinctive ways of knowing' (Haste & Baddeley 1991) that a significant proportion of our students have. Numbers of female dyslexics in HE are clearly on the increase, and in addition, in some areas they would appear to be accessing learning support tuition in greater numbers than males. In universities where this is not the case, this poses the question of whether these women and the issues they have are in fact being overlooked altogether. Therefore, surely, it becomes even more important that the distinctions between the ethnography of male and female dyslexic students are fully understood and acted upon.

Barbara Tull

Barbara Tull is a Learning Support Tutor at the University of Bath. This article is an extract from a longer MA essay.

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The Walter Bramley Legacy

COMPILED BY MARGARET ROOMS

Sadly, Major Walter Bramley died aged 77 on 19th May 2005 after a long illness. In his life he never wanted the limelight, preferring always to be known through his work. It seems fitting then that we should mark his passing with a look at his legacy: the wonderful teaching tools he has provided for teachers, support assistants and parents to use with anyone who needed some guided support with literacy. Comments from teachers and learners have been included to illustrate the range and depth of Walter's legacy and to allow them to pay their own tributes.

But first – a few words from Liz Brooks, former Executive Director of the Dyslexia Institute:

In 1982 I started teaching in the same room as Walter Bramley at the Dyslexia Institute in Bath. He was an inspiration to me. A quite outstanding teacher. I learnt so much from him. *Units of Sound* came from Walter's great understanding of the English language and the needs of those who have difficulty in acquiring the skills of written language. All his work that followed was based upon the same firm foundations. Walter's humour will be the longest lasting memory for me – he always had an appropriate joke or story, just at the moment when the student needed it. I had the pleasure of watching so many young people flourish in his care!

When *DILP* was first produced it was Walter's influence that enabled me to make a contribution to the scope of that publication and it has been rewarding to watch *Units of Sound* and its accompanying publications become integral to the DI's range of provisions over the last ten years.

Walter Bramley gave a great deal both to individuals and the development of the Dyslexia Institute and I remember him with great affection and enormous respect.

Liz Brooks

THE MATERIALS

The thing that first attracted me to the Bramley materials was their simplicity and clarity. I first came across *Units of Sound* when I fell over it in a box in the Tonbridge DI in 1992. I was teaching in an outpost and had five pupils whose reading had stalled in spite of the best efforts of two DI teachers. I put them on *Units of Sound* – using just the books as we didn't have enough time for the tapes. At the end of the term all five children's reading scores had gone up significantly. Since then I have worked with the Bramley materials continuously and have been privileged to develop some of them into more accessible forms – without ever losing sight of the firm

teaching principles that underpin them, and which give them their unique usability and effectiveness.

When writing the distance learning course for Units of Sound last Summer I tried to write down what I thought were the Bramley principles of learning that run through all his materials. They are:

- All work given to a learner should be achievable.
- Start where the learner is working comfortably and not where it is already hard.
- Within a single lesson, give a range of exercises. Some new and challenging, some reaching accuracy and fluency and some consolidating automaticity.
- All tasks should be enjoyable so that learning is a positive experience.
- Encourage and provide independent work as much as possible so that the learner develops confidence in his own ability to learn, rather than becoming teacher dependent.
- Remember that you are always teaching a student – not a programme.

THE ACTIVE LITERACY KIT



I can't remember how I first got my hands on this material but I know it was unpublished, in a ring binder format and called *Developing Early Literacy Skills*. Because it was unpublished we had *Not to Be Photocopied* on the front cover in large letters. Needless to say all the teachers in the London DI ignored that completely as we each discovered the pearls contained within those pages: the timed word endings; the no-name alphabet; the cvc reading and spelling exercises. The quiet joy on children's faces as they reached the target time on an exercise and said 'Can I do it again?'. To me the magic of



this material (since then turned into the Active Literacy Kit by Fiona Hover and LDA) is that it gives the teacher as much pleasure to use as the pupils: 30 simple exercises that build those early reading and spelling skills securely and thoroughly. In skilled hands it is pure magic.

From teachers:

ALK – a comprehensive kit with a good teachers’ manual. The children especially enjoy using the vowel objects.

V White, Bury

From children:

It makes it fun and you want to beat the score.

Danny, London (12)

DIY READERS’ SUPPORT PACK



This is really a hybrid from ALK and the SPELLIT research’s Home Support Programme – which itself broke new ground for the DI in supporting parents to work directly with their children. I phoned Walter to ask him if he thought the ALK card exercises could be used by parents. His reply –

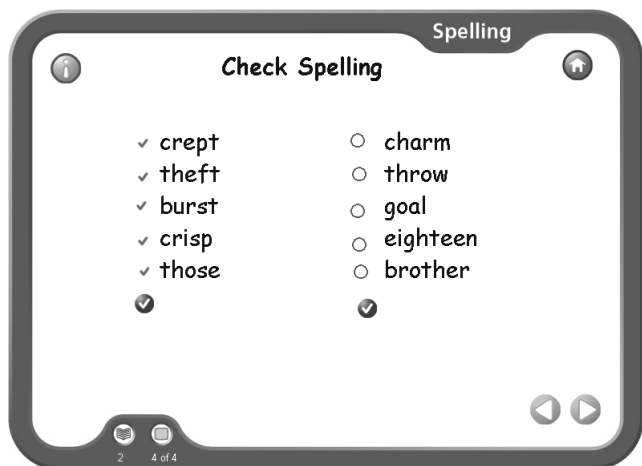
‘Of course they can be used by parents. If the materials have been written properly then anyone should be able to use them.’

From teachers:

The children like to achieve the times. This is the biggest element of the programme – it encourages them to achieve.

Judith Cox SSA

UNITS OF SOUND



The best known of the Bramley materials, Units of Sound, started out using audio tapes and pupil books and was transferred to CD-ROM format in 1995 and is now on its 4th revision (2004). Throughout those often difficult times of developing the programme for CD-ROM, Walter was a powerful source of support and (of course) insight. As a structured multisensory programme for Reading and Spelling, Units of Sound has many unique features. In this age of rationing for SEN support, key assets are the amount of independent work possible (approx 80%); its suitability for group work rather than 1:1 and the wide range of learners it can be used with – children, adults, dyslexic learners and all others needing support with basic literacy.

The quotes from users reflect this range.

From adult learners:

- ‘This is just what I wanted.’
- ‘I can do this by myself.’

Adult learners from Greenwich Community College

Units of Sound reaches the hard to reach learners; it is popular with everyone but seems to spark the interest of those who would otherwise refrain from participation in learning. A learner, Mick, would do nothing in my classes but read newspapers until I introduced him to this software. My problem was then to get him to stop using it. Mick said ‘Because someone has gone to the trouble of making this software, I realise that people care about my education and that I’m not just here to pass the time of day.’

Kate Davies and her student Mick from HM prison

And from children:

‘Units of Sound has helped me. It shows you what the sounds are in words. It makes it easier to break the words down for reading and to spell them right. I used to find English hard, but now it’s a lot easier.’

Ross, aged 11, has been using UofS for two years and a half; reading accuracy on NARA has gone from age equivalent 8.04 to AE 11.07 in the last 12 months.

‘It (UofS) helps you to learn to read more easily because at the beginning it explains the sounds. I can read better because I’ve been doing that.’

Lauren 11, has been using UofS for 18 months: reading accuracy on NARA has gone up from AE9.06 to AE 11.05 in the last 12 months.

It makes you do more. I can’t wait for the home programme to come out.

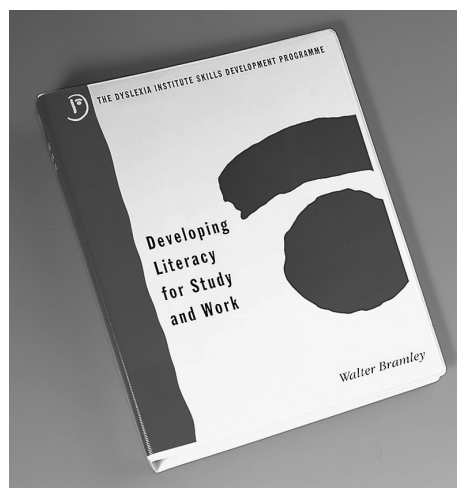
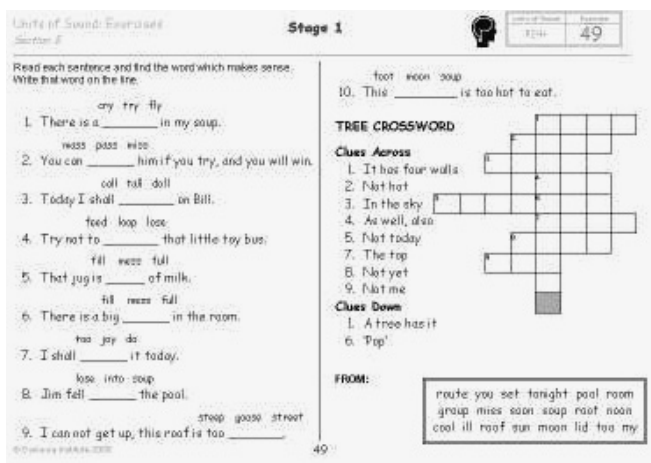
James, London (12)

It’s easy to understand.

George, London (13)

UNITS OF SOUND EXERCISES (FORMERLY KNOWN AS WORD BANK)

These exercises work alongside UofS stage 1 and are especially useful because they develop independent learning right from the very beginning. They were redesigned into a more user-



friendly format 3 years ago and are currently being updated to match UoFS v4. I used to say that Units of Sound was the best kept literacy secret in the country – but we have managed to tell quite a few people about it since then! The Exercises however are still underused, which is a shame because they are very clever and children love doing them.

From a teacher

‘I think they are brilliant, because they do not only reinforce work covered in reading and spelling, but they help to establish a variety of study skills in beginning readers and spellers, as well as introducing an element of playing with words, which encourages repeated practice often unnoticed by the students. They learn to scan text and to skim it for detailed purposes; to collect information according to specific criteria and reject material which is not needed for their purposes; to collate the information and present it in different ways. They learn to sort and classify letters and words and to identify patterns. They learn ways to cross-check their work. They learn to make conscious links with other learning. And they have fun doing all this!’

CS – Wales

And from her pupil

‘They help you to spell. The games are brilliant. I like the puzzles. If you don’t know some words, it will help you. I like the quizzes because they’re really, like cool to do.’

Jordan, age 10

DEVELOPING LITERACY FOR STUDY AND WORK

This is the manual that has the content employers want to be taught – but which very few people are paid to teach. This is for learners who have largely conquered their reading problems and who need to become good written communicators. It is the DI’s plan to someday take this content and develop it into an interactive ICT format so that so many more people can benefit from the very clever thought provoking exercises it contains.

A teacher and former student of Walter Bramley’s training course says:

‘When *Developing Literacy for Study and Work* was first published it quickly became my ‘bible’ when working with teenagers. It has helped many to become more confident in their use and understanding of the English language.’

DJ Thompson, Monmouthshire

And finally..

A few years ago Walter paid a visit to the London DI to see the ‘Bramley’ teaching room named after him and to meet some of the pupils and teachers who had benefited so much from his work. The teachers (from across the DI) each said a few words about how they used his material and I remember Pam Duncan saying:

I just want to thank you Walter – for making teaching reading so easy.

Walter Bramley’s legacy will continue to benefit learners of all ages across the English speaking world for many years to come.

Margaret Rooms

Margaret Rooms is Head of Educational Development at the Dyslexia Institute

BOOK REVIEWERS WANTED

Would you like to review books on an occasional basis for Dyslexia Review?

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The Torfaen Reading Improvement Project

Literacy

JANE OWEN

'Torfaen teachers go on a trip this term'

'Torfaen LEA Advisory team has asked the Dyslexia Institute to help it tackle the learning difficulties that may lie behind children's underachievement at school.

The Torfaen Reading Improvement Project (TRIP) aims to ensure that every school in Torfaen has a dyslexia friendly tutor, who will be able to help teachers and parents decide if a pupil may have dyslexic tendencies. The project will concentrate on training tutors to improve reading skills within the school.

TRIP begins on 19 January at the ICT suite at Pontymoile CP with 2 day training sessions for all tutors, followed by 8 weeks on-site Dyslexia Institute supported teaching for pupils, using specialist resources.

Let's hope the trip is not just a one-off but is the beginning of a lifetime's journey of discovery!

The short article above appeared in the Torfaen Local Authority in-house newsletter and announced the start of the project. The Dyslexia Institute Wales had been invited to talk for an hour about dyslexia friendly schools at a Primary Heads' meeting in Cwmbran in November 2003. Following on from this the Torfaen Schools Advisory team asked the Dyslexia Institute to deliver staff development to ensure that the Local Authority had a dyslexia friendly tutor available in every school, to train the tutors to work towards improving pupils' reading skills and to conduct a needs analysis of all specific learning difficulties requiring support in Torfaen schools.

All Torfaen schools across the eight school clusters were invited to join the project in early January 2004 and all but two schools accepted. The two day training programme was organised in school clusters and delivered in the IT suite of Pontymoile Primary school during the weeks beginning 19 and 26 January, when three key resources were distributed: the DIY readers' support pack, the Active Literacy Kit and Units of Sound. The cohort of participating tutors involved a wide variety of experience and qualification, ranging from Learning Support Assistants to Headteachers, so the training programme was necessarily quite comprehensive. This was delivered on two consecutive days for each cluster and included dyslexia awareness training, information on assessment, phonological awareness, reading accuracy, reading comprehension, resources for writing, teaching preparation and reviewing progress. The Training Evaluation sheets were generally very positive although it was evident that by the second afternoon some participants had received far too much

information and with hindsight it would have been better to have left a week between each training day!

All schools were sent a specific needs analysis questionnaire in early January. It was noticeable that in the Early Years most schools reported a large number of pupils with Speech and Language difficulties and a sizeable number with Emotional and Behavioural difficulties. At Key Stage 1 the largest group was again pupils with Speech and Language difficulties, closely followed by a group of pupils who were now deemed to have General Learning difficulties and yet another large group of pupils with Emotional and Behavioural difficulties. At Key Stage 2 the largest group was now of pupils with Emotional and Behavioural difficulties, followed by two groups of an almost equal number of pupils with Speech and Language difficulties and then Dyslexia being mentioned for the first time. Is it possible that some pupils are mis-diagnosed as having General instead of Specific Learning difficulties at Key Stage 1? Were the pupils with Emotional and Behavioural difficulties being screened routinely for literacy?

During the next eight weeks the tutors began to work with pupils in their schools, putting into practice their newly acquired understanding and skills. Every school was visited at least twice by the Dyslexia Institute Wales Principal to provide team-teaching and support, the main challenge being to organise a timetable that suited all forty two schools and then to find them. One local, when asked where Cwmffrwdroer school was, had never heard of it and yet there it was, just two streets away! The project was implemented in a variety of ways, depending on the staffing resources of individual schools. Some tutors adopted a whole class implementation, others withdrew small groups of children, some used the resources in Homework Clubs, others set up small language-support rooms. All tutors reported that the project had made them re-evaluate their whole way of thinking about how to improve all pupils' literacy and given them the confidence to deliver a structured, cumulative, multi-sensory programme in the pupils' preferred learning styles. They revealed that only Infants' teachers had ever been trained to teach reading and that they really appreciated this opportunity for them to learn how to provide effective intervention for the many pupils they came across who were struggling to read.

A plenary session was held at the end of the project in April. In Key Stage groups the tutors discussed and reported on their experiences of the project, any particularly successful techniques they had used and the experiences of their pupils. The emphasis was placed on planning for the future and so tutors worked together to draw up a hypothetical action plan for a pupil likely to benefit from a similar literacy intervention programme for September 2004, specifying the pupil's



learning objectives, the resources to be used and the time needed for delivery. Evaluation questionnaires about the project were distributed to all tutors to enable key issues to be identified and from the responses it was evident that TRIP had a high level of impact on teaching and learning.

Comments included:

- activities can be used as a whole class session
- improving self-esteem
- being able to achieve after years of underachieving
- gives pupils confidence and it's fun so they want to come back
- progress visible quite early on
- children eager to take part – confidence has shot up
- children never fail...feels like fun not work
- parental involvement giving parents confidence
- benefits all children

Most tutors also reported back on improved motivation and attendance of pupils but a key issue raised was that of time allocation. Many tutors expressed frustration at acquiring much needed skills but lacking the time to extend the help to other pupils struggling with poor literacy.

- big demand for support – too many children – not enough help
- we don't like playing God – why can't we have the time to help everyone who needs it?

In order to build on the considerable success of the project some key recommendations were made:

1. That a named dyslexia friendly tutor from every school in Torfaen should be given agreed, specified time every week in order to plan, teach and liaise effectively.
2. That the opportunity for accredited training was offered to all tutors.
3. That a lead person in the Authority should be identified to provide continuing training and support to all the dyslexia-friendly tutors.
4. That allocated time should be made available on a regular basis for the tutors to liaise with existing LEA specialist intervention staff.
5. That the NQT induction programme for all Torfaen schools should include dyslexia-friendly training.

Not bad for a term's work!

In September the Dyslexia Institute was invited to provide a half day In-Service Training session for Torfaen dyslexia-friendly tutors. Following on from this, during the Autumn term the Dyslexia Institute was asked to plan for TRIP phase 2 to ensure that the progress made throughout Torfaen was maintained and developed. It was agreed that a day's consultancy a week would be provided by the DI to establish a rolling programme to ensure continuity of best practice. Each cluster would in turn identify a lead school in which a ten

week programme of apprentice style training was delivered for one day a week. All schools in the cluster would then nominate their dyslexia friendly tutors to attend with one or two pupils for one of four training sessions of an hour and a half on that day. For the rest of the week those tutors would work with other pupils and colleagues, thus ensuring that all schools retain and develop the expertise required to improve literacy skills. A bank of key resources was set up to be used in the project and owned by the LEA. This resource kit would then be available for use by all schools in that cluster, with the lead school taking responsibility for recording use and checking the return of the resources for the ten week programme. So that a holistic support mechanism is established the School Development Adviser, Educational Psychologist and members of the SpLD team working within the cluster would attend the training for their cluster on a regular basis.

At the end of the ten week programme each school would give a brief written report on pupil progress, benefits to the tutors and on how others in the school who were not directly involved may also have benefited. This would be provided and discussed at a handover meeting which tutors from the next cluster would also attend. The programme is to continue in this format so that three clusters are served in each academic year.

So far one cluster programme has been completed, the second is half way through and the third will begin after half term. The response has been very positive:

- We have found the last 10 weeks to be very useful...the expertise and advice has been invaluable and it was a great opportunity to try out several resources...the weekly visits consolidated our knowledge and understanding and have given us the confidence and peace of mind that we are addressing the children's needs...the programme has worked really well...
- The resources used with the children are very helpful...the ability to bring back information and resources to school to share with other members of staff is invaluable.
- The programme of work used has been a great success. All support staff have had training within this area as a result of this project. The activities suggested are being used to improve the reading and spelling of all the children in our school...the children have enjoyed having their weekly sessions...they have better self-esteem and more confidence about themselves when doing their work...a big thank you for all the support and guidance given to both pupils and staff.
- The children thoroughly enjoyed the sessions and worked hard...the improvement was noticeable from about week 4. By the end of the 10 weeks both had gained in confidence and the improvement in reading and spelling had been noticed by their class teacher...as a result we have bought more of the resources so now everyone in each of the three year 2 classes has access to the literacy support which can help all children...an excellent programme which should have considerable effect on the literacy standards in our schools.



The new Foundation stage to be introduced in Wales, with its emphasis on phonological awareness and pre-reading skills, is widely welcomed. However TRIP tutors have sounded a note of caution: if the only teachers trained to teach reading are Infants' teachers, then who will teach reading at Key Stage 2? Perhaps this will prove to be the ideal opportunity to ensure that all teachers and training providers are trained to teach literacy, at whatever stage ! At least Torfaen will be ready !

Jane Owen

Jane Owen joined the Dyslexia Institute in Cardiff in 1998 as Centre Principal.

REFERENCES

DI Y readers' support pack, Active Literacy Kit (LDA) and Units of Sound v4 are all available from DI Trading Ltd, The Dyslexia Institute, Park House, Wick Road, Egham, Surrey, TW20 0HH 01784 222 300

Dyslexia Teaching in Zimbabwe

TESSA MATTINSON

Abroad

BACKGROUND INFORMATION

Zimbabwe is a third world country in central southern Africa, which was governed by the white minority up until 1980, when it achieved independence. It still has a relatively sound infrastructure and was, until 2000, economically more successful than many of its neighbouring countries. In the last five years the devaluation of the Zimbabwe dollar has had a considerable negative impact on its ability not only to purchase and import materials but also on its previously world-class educational standards. For example, in 2000, it cost Z\$19 to purchase £1: now that same £1 costs Z\$25,000!

Education was based on the high standards of both Europe and America. It followed, and still follows, the British system with schools sitting Cambridge IGCSE and A Level Examinations. There were a number of extremely good Teachers' Training Colleges throughout the country, which equated to those in England. Until the late 1970s there was a combination of both government and independent schools. Government schools were either for black or white pupils and were staffed by those of similar race. This slowly changed so that there was more racial balance in schools. The pendulum has now swung the other way with the white and coloured children being a relatively small minority.

Between 1980 and 2000, the government increased the number of schools in the rural areas and these are attended by all black African pupils and staffed by locally trained teachers. Unfortunately, due to the increase in demand, the standard required for entry into The Teachers' Training Colleges has been reduced; the standard of lecturers and equipment has also suffered, with the result that many of the teachers leaving colleges and universities are inadequately prepared and their knowledge, particularly of remediation and associated issues, is very limited. Since 2000 government resources have been

diverted away from education and the situation has consequently deteriorated still further.

REMEDIAL TEACHING IN ZIMBABWE

There is a very strong emphasis on sport in Zimbabwe and many pupils, particularly boys, who could achieve success on the sports field, are 'forgiven' their low standard of literacy skills. When I came to this country in 1990, I was told that there 'was little need for remedial teachers as there were very few pupils with difficulties'! Undoubtedly there were many pupils attending all schools experiencing learning difficulties, but there was little opportunity for these children to be assessed or to receive qualified help.

The greatest need was, and still is, amongst the white children because the African children are taught English as a second language, which means that they are actually 'taught' rather than learning through 'osmosis'. Additionally, their culture has a strong oral tradition, one that places great emphasis on memory, and these children seem to have a much better ability to memorise information and, in particular, sight words. So, in 2000 it appeared that African children were less in need of our help than white children, although in many instances their teachers' inadequate knowledge of English does lead to poor pronunciation, spelling and comprehension, and the many idiosyncrasies of the English language are often beyond them. In the last few years, however, the changes in society and methods of learning have led to many more African children requiring help with SpLD.

The Remedial Teachers Association (REMTA) came into being in 1995, at the suggestion of an educational psychologist, who was utterly frustrated by diagnosing children with SpLD and then not being able to refer them to qualified remedial teachers. The Association has two main objectives:



The Remedial Teachers Association Meeting in Harare in 2004

- (A) to increase the number of qualified remedial teachers that are available to teach either in schools or independently
- (B) to increase and update the knowledge of all teachers working with children. To this end we have held a termly seminar, which can be attended by any teacher, professional or parent with an interest in SpLD.

(A) Increasing the number of Qualified Remedial Teachers

The REMTA Committee was tasked to find a suitable qualification that would fulfil the following requirements:

- Internationally recognised – we felt that this was very important to all applicants. A locally based course would not carry the ‘weight’ of an already recognised course. Neither did we have the expertise, nor finance to set up our own course. It was also acknowledged that although we hoped that those who qualified would remain in this country, realistically there would be a proportion who would wish to teach outside Zimbabwe, either short or long term.
- It needed to be a correspondence course. Many applicants would be teachers employed full time, and they would be unable to take a year off to train.
- The course should have some degree of flexibility so that work could be accomplished over a reasonable period of time.
- All materials would probably need to be provided.
- Continuous assessment rather than a final examination was felt to be an enormous bonus.

Value of Overseas Courses

- These provide the ‘paper’ qualification respected by both parents and schools.
- For many students such courses offer re-assurance, and consequent increase in confidence as remedial teachers.

- A structured layout of the course would ensure that practical skills are taught and materials are built up over a period of time, so that teachers have resources to work with as they progress.
- The textbooks would be a very useful for reference after the course has been completed.

Committee Members were tasked to canvas South Africa, USA, UK and Europe, and other African countries. It was my job to research the UK. I had already enrolled on the Hornsby Diploma Course in 1994, as I wished to upgrade my knowledge and to hold an internationally recognised diploma. I was fortunate to have a meeting with Dr Bevé Hornsby and senior members of staff who agreed to assist us. In May 1996, 20 Zimbabwean students duly enrolled. This was felt to be a minimum viable number. I took it upon myself to organise a termly meeting for students to try and ensure that no one felt isolated.

To date we have had 60 students studying for the Diploma, 40 of whom have qualified and 10 are still training; 10 have withdrawn from the training programme, due in part to the trying times we have been experiencing in Zimbabwe. Tutors are usually very encouraging and patient with questions other than those directly referred to in the Modules, and try to offer practical solutions to problems. The majority of those who have qualified have been awarded either Distinction or Merit, an achievement of which we are enormously proud. A spin-off has been the association of the students and the value they place on this friendship of kindred spirits.

I was absolutely delighted to learn, at my recent meeting with Shirley Cramer, that the amalgamation with the Dyslexia Institute will mean that there is a far greater choice of courses available at differing academic levels. This should allow a far wider group of interested people, particularly concerned parents, to receive much more assistance to help their children. This is important in third world countries where



specialized teachers are such a sought-after commodity. In a recent survey I was distressed to learn that we are down to less than 10 qualified SpLD teachers, working independently in Zimbabwe, although a few more are employed by schools to run Progress Centres, as many have been forced to leave the country. Our few psychologists are doing an excellent job in identifying the children, but the frustration is enormous when there are still no teachers available to help them!

I list below some of the issues we face here in Zimbabwe, which other interested persons in third world countries might like to consider.

1. *Cost* – This is a very real problem in third world countries and I think is best illustrated using the ‘Hamburger’ principle. (This example, from *The Economist*, looks at the time taken to earn sufficient funds to pay for a basic meal of hamburger, chips and a coke.) If we apply this principle, first world teachers would probably be able to pay for a course such as the current Hornsby Correspondence Course costing £2,000, from the salary they receive in one term or less, very possibly they could also pay for it from their savings. In Zimbabwe teachers would have to pay almost their entire gross salary, (untaxed) for a year! With inflation running at over 300%, saving is virtually impossible.

Bursaries schemes are in place to try to assist successful applicants, but these tend to involve bonding, which is often neither practical nor possible.

2. *Materials* – We have had an enormous problem in importing the materials. Customs are quick to look at anything that could be considered ‘saleable’. We are trying to work with the Ministry of Education to ensure that boxes marked ‘Educational Courses Materials’ are exempt, but like many government departments communication between the two ministries is very difficult. However, most students have cheerfully paid duty/tax as they feel that the quality of the materials was well worth it. The majority of bookshops now find that locally produced editions are rapidly reducing in quality, and imported goods, with our constantly rising exchange rate are often prohibitively expensive.

3. *Assessment Materials* – We really would like to see a Hornsby/Dyslexia Institute Assessment, which was suitable for children 5–15, and could be used both for diagnosis and continuous assessment. Hence, Qualified Remedial Teachers and Students could use this for assessing ‘at risk’ children, and use the reading and spelling, and perhaps other visual and auditory tests, to monitor children’s progress. (Many schools here are still using Schonell as the benchmark as new tests are so expensive.)

4. *Seminars and Courses* – We feel very isolated in terms of new ideas etc. and would welcome the opportunity to hear first class lecturers. Some students and teachers do have the opportunity to travel and many would like to include a course or seminar if it were practical. If details were published well in advance (6-12 months) this would allow sufficient time for planning.

(B) Increasing and updating the knowledge of all teachers working with children

Our second aim is to increase and update the knowledge of all those who work with children, which includes those in the

medical and educational fields as well as interested parents, grandparents and friends. Currently we have about 50 schools, which have joined as school members, about 15 full members (Qualified Remedial Teachers) and about 15 associate members, these are interested persons. It was agreed that we would provide a termly seminar that lasts half a day each term. We hoped to improve the standard of teaching, provide new ideas, and an opportunity for teachers and others who attend to meet and discuss items of mutual interest.

Lectures are given on subjects requested and suggested by members. These subjects have included: Comprehension, Dictation, Thinking Skills, Maths, Ways of helping with reading and spelling, Organisational Skills, Art, Dyslexia in Secondary Schools, Teaching Reading, Language and Poetry, ADHD, Assessment and the work of Educational Psychologists, Gross Motor Skills, etc. I am delighted to report that a significant number of these lectures have been given by Hornsby Students as a result of dissertations and Action Research! We try to include an International speaker once a year to broaden our horizons, but the costs are huge for us. To date we have been very fortunate in having a lecture from Dr Amanda Kirby from the Discovery Centre in Cardiff, and a lecture from Janet Condy, who teaches reading skills in Cape Town.

We have also conducted three Roadshows, one in 1995 when we were delighted to welcome Dr Terri Passenger and Prof Colin Tyrell to Zimbabwe, in 2001 when Geraldine Duffield came up from South Africa to talk on Maths Teaching, and again in 2003 with Prof Kath Hart, from the Nuffield Maths Centre. Road shows are exhausting for the committee and hard work for our guests, as we take them the length and breadth of the country visiting schools and giving lectures, with only one or two days sight seeing! We have a Roadshow due to start on the 28th May this year, on Emotional Intelligence, which adds a new dimension. The country is extremely short of fuel and schools are being asked to donate litres of diesel, and to arrange for lifts so that as many people as possible can attend! However, it does offer the greatest opportunity for interested persons to come and hear speakers with an international reputation and we are thrilled to have psychologists, occupational and speech therapists included in our audiences, particularly as they are an ‘endangered species’ in Zimbabwe!

Living in a third world country such as Zimbabwe often helps to bring out the best in its residents. The trials, tribulations and frustrations tend to make us very versatile. You rarely hear people say; ‘we can’t do this’ but rather ‘we’ll make a plan’. Teachers are amazingly resourceful and create wonderful games and books from the most meagre resources. We are extremely fortunate by and large, in still having children that are not only keen to learn, but respectful and appreciative of their teachers. However, we crave new information and to learn about new approaches and ideas. So if there were any lecturers who would like to come and visit us, we would love to have you and would offer you a very warm welcome. Please contact me on assets@zol.co.zw

Tessa Mattinson

Tessa Mattinson is a course tutor for 10 HDIC students in Zimbabwe and was a founder member of REMTA in 1995.



BOOK REVIEWS

DYSCALCULIA GUIDANCE: HELPING PUPILS WITH SPECIFIC LEARNING DIFFICULTIES IN MATHS

By Butterworth B and Yeo D (2004)

Publisher: nferNelson

Ref: 7446116

Price: £25.00

The combined knowledge and expertise of the authors, one a neuropsychologist and the other a practising teacher of pupils with specific learning difficulties, is successfully brought together in this very practical book.

The book is written in a clear format and begins by describing developmental dyscalculia and general guidelines for helping such pupils and learners, including adults.

The book then goes on to concentrate on specific teaching suggestions, based on Butterworth's definition and Yeo's experience.

The appendices suggest further reading, web sites, organisations, specialist schools, software and suppliers of maths teaching equipment.

The authors state that a dyscalculic learner lacks the 'starter kit' needed to understand numbers and number operations. The implications of this lack are considered in terms of teaching, firstly in more general terms, and then on specific teaching suggestions, starting with the number system, calculation facts and working with larger numbers. Lastly, more general areas of maths are included.

The book recognises that support for dyscalculic pupils must take into account the fact that they calculate maths in very simple, basic ways. They also have a very poor working memory for maths thinking and, consequently, find it very difficult to make progress in maths.

The major part of the book concentrates on specific teaching suggestions, and introduces a structured teaching approach. The purpose of this approach is mainly to give teachers practical number activities to allow dyscalculic pupils to acquire the 'building blocks, or starter kit' that they have failed to acquire in the school classroom. Many of the activities included have a games format, so there is an element of luck and success is not always entirely due to mathematical skills.

The expertise and experience of the author, Dorian Yeo, clearly comes through, as does her success in using the methods suggested.

Although written with the dyscalculic pupil in mind many of the activities would also be useful with a dyslexic learner, and, in fact, with any learner who is struggling.

This is a book I thoroughly recommend to all teachers involved with pupils who experience specific difficulties in

basic maths, as described in this book. It is highly practical and usable and is a welcome addition to an increasingly recognised but often poorly understood difficulty.

Since receiving this book for review we have learned sadly that Dorian Yeo has died. As the book says: Dorian was 'an expert in the field (dyscalculia) and a highly experienced classroom practitioner'. Many have benefited from her expertise: teachers she has trained, the children she has taught and of course, through her writing. She will be sadly missed, both personally and professionally.

Pauline Clayton

Pauline Clayton is Principal Tutor for Maths at the Dyslexia Institute.

CHOCOLATE MOON

By Mary Arrigan

Publisher: Barrington Stoke Ltd

ISBN: 1-842992-93-7

Price: £4.99

I liked the story because it was about a boy called Chris and his grandmother. His grandmother is starting to forget things as she has Alzheimer's. Whenever she starts to forget things, the only thing that she remembers is the chocolate moon. This is because when she was younger she used to look out of the window at the huge white chocolate button in the sky.

I would have liked to find out more about Alzheimer's in the book and it would have been useful to have more information. The book was easy to read and understand. The first sentence just got me into the book, as I wanted to find out why Chris did not like Sundays. I liked how the book gave me an idea about how people go through difficult situations. It was helpful to find out about the situation from a child's view and not a grown up's. As the story went on, I feel that I got to know more about the different characters and had a better understanding of the situation and reasons for doing the things that they did.

I don't normally read books but when I started to read this one I got into it very quickly and liked it more than I would any other book. I like playing football and not really reading books so that's why it was funny when I got into the book. My mum thought she was seeing things when she saw me reading and actually finishing the book and saying that I liked it. I liked the cover of the book including the title and the subtitle.

Liam Roche

Liam Roche is a 13 years old student at the London Dyslexia Institute

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