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EDITORIAL

Thank you to all those who have provided Genevieve, myself and the NSW Chapter with feedback on the new look for the journal. It is greatly valued and helps us to provide a forum that is accessible, rigorous and practical.

I must say I am especially pleased to be able to include a Letter to the Editor from Greg Robinson: this type of exchange represents one of the most important and valuable aspects of our journal. I look forward to more input on this and other topics of relevance to our work.

In the first of our Practically Speaking pieces, Paul Hunt describes how he and his staff make inclusive practices happen in their context at Singleton. This is followed by a similarly positive overview of functional instructional practices taking place in a Sydney school, as reported by Anne-Louise Baker and Jennifer Stephenson. I think you will agree with me that the underlying theme in both contributions is the maximisation of learning outcomes for individual learners, no matter the adjustments that are necessary to enhance generalisation and participation.

Bob Conway, Sue Pascoe and I then present a brief paper on our attempts to observe and analyse differentiated teaching approaches in regular classrooms. As you will see, this is not an easy phenomenon to measure! In the second of our three Refereed Papers, Ian Dempsey tackles some contentious issues with regard to the relationship between political contexts, events and the teaching profession. I look forward to your responses to this insightful and timely paper. A case study by Heather Jenkins and Shirley Dix then follows, powerfully illustrating the contribution of action research methodologies to our improved understanding of school and class level change processes. Finally, we have two very thorough Book Reviews by Racheal Arthur-Kelly and Gail Brown. I know you will find the points they make to be very useful as you survey the literature in our field.

With all good wishes for a refreshing end-of year period and a brilliant start to 2005,

best regards

Michael Arthur-Kelly
Editor
Letters to the Editor

2 July 2004

Dr Michael Arthur-Kelly
Editor
Special Education Perspectives
Special Education Centre
University of Newcastle
CALLAGHAN NSW 2308

Dear Dr Arthur-Kelly

I am writing to comment on a statement made in the article titled “A Teacher’s Guide to Controversial Practices”, which was published in the last issue of Special Education Perspectives (Volume 13, Number 1, 2004). In this article it is stated that the use of tinted lenses for reading difficulties, reportedly caused by Scotopic Sensitivity Syndrome (more commonly known as Irlen Syndrome (IS)), has been assessed by the American Optometric Association, who found “there is currently no scientific research to support the ‘scotopic sensitivity’ syndrome hypothesis”.

I am concerned that this statement conveys the impression that the use of tinted lenses has no experimental support or no credible scientific theory as its basis. There is now a large and growing number of controlled studies that have reported improvements in reading with the use of coloured filters. These studies have reported improvements in reading when using coloured plastic overlays, coloured computer monitors and when illuminating text with coloured light (Bouldoukian, Wilkins, & Evans, 2002; Chase, Ashourzadeh, Kelly, Monfette, & Kinsey, 2003; Croyle, 1998; Evans & Joseph, 2002; Jeanes et al., 1997; Noble, Orton, Irlen, & Robinson, 2004; Northway, 2003; Scott et al., 2002; Solan, Brannan, Ficarra, & Byrne, 1997; Solan, Ficarra, Brannan, & Rucker, 1998; Tyrrell, Holland, Dennis, & Wilkins, 1995; Wilkins, Jeanes, Pumfrey, & Laskier, 1996; Wilkins & Lewis, 1999; Wilkins, Lewis, Smith, Rowland, & Tweedie, 2001; Williams, Le Cluyse, & Littell, 1996). There have also been numerous controlled studies which report improvements in eye movements, eye strain, headaches, and reading achievement when using coloured lenses (Evans, Patel, & Wilkins, 2002; Harris & MacRow-Hill, 1999; Lightstone, Lightstone, & Wilkins, 1999; Robinson & Conway, 2000; Robinson & Foreman, 1999 a, b; Wilkins, Patel, Adjamian, & Evans, 2002). A number of studies
have used placebo controls (Bouldoukian et al., 2002; Evans & Joseph, 2002; Jeanes et al., 1997; Robinson & Foreman, 1999a, b; Wilkins, Evans, Brown, Busby, Wingfield, Jeanes et al., 1994; Wilkins & Lewis, 1999; Wilkins et al., 2002). It should be noted, however, that not all studies have reported improved reading achievement (Fletcher & Martinez, 1994; Martin, MacKenzie, Lovegrove, & McNicol, 1993), which is to be expected, as reported improvements in print clarity may make word recognition easier, but may not lead to the development of word recognition skills without additional reading tuition (Kyd, Sutherland, & McGettrick, 1992; Robinson & Foreman, 1999b). All of the studies cited above have been reported in peer reviewed journals. These journals have reviewers with expertise in their fields, and are unlikely to recommend the publication of studies that are not well controlled or have serious methodological flaws.

In addition, a credible scientific theory has been put forward and which has been subject to numerous controlled studies in peer reviewed journals. This theory relates to a deficit in the magnocellular visual neurological pathway (Demb, Boynton, Best, & Heeger, 1998), which may cause an overlapping of visual images between consecutive eye fixations when reading (Boden & Brodeur, 1999). Information is transmitted from the eye to the brain by two parallel pathways: the magnocellular (M) pathway and the parvocellular (P) pathway. These two pathways are claimed to have specific roles in reading, with the M-pathway guiding eye movements and the P-pathway providing detailed information at each focus point or fixation (Williams & Lovegrove, 1992). The M-pathway is not only claimed to guide eye movements, but may also be involved in suppressing the potential overlap of images between consecutive eye fixations when reading (saccadic suppression; Hussey, 2002). Studies have identified a diminished or delayed visual evoked potential for poor readers along the M-pathway in response to moving stimuli (Livingstone, Rosen, Drislane, & Galaburda, 1991; Romani et al., 2001; Solan et al., 1997). Investigations of poor motion sensitivity (Demb, Boynton, & Heeger, 1998; Slaguis & Ryan, 1999; Talcott, Hanson, Assoku, & Stein, 2000) have also found a reduced activation of the MT (movement) area of the visual cortex for poor readers, with reduction in MT activity being correlated with reading achievement (Demb, Boynton, & Heeger, 1997). The MT area is sensitive to visual motion and is dominated by magnocellular input.

Colour filtering is claimed to influence the functioning ability of the M-pathway (Chase et al., 2003; Edwards, Hogben, Clark, & Pratt, 1996). Red light impairs the visual-perceptual function of the M channel, including the perception of motion, global shape and flicker perception (Michimata, Okubo, & Mugishima, 1999; Stromeyer, Chaparro, Tolas, & Kronauer, 1997). The activity of the M-pathway increases with the removal of red light (Lehmkuhle, 1993), with reading performance improving when red light is removed by the use of
blue filters (Iovino, Fletcher, Breitmeyer, & Foorman, 1998; Solan et al., 1997). Chase et al. (2003) conducted a series of studies which found that the accuracy of oral reading was significantly poorer when using red filters in comparison to blue and green filters, which confirmed the physiological evidence that red light suppresses functioning of the M-pathway. Blue and blue-green are frequently used to reduce the symptoms of IS (Irlen, 2003), which should improve M-pathway activities, as longer wavelengths (red) would then be absent (Chase et al., 2003).

I am concerned that a professional organisation, such as the American Optometric Association, would not be aware of both the large body of research on the positive effects of the use of coloured filters, and of the well researched theory relating to a deficit in the magnocellular visual neurological pathway. The “Scotopic Sensitivity Syndrome” hypothesis has never seriously been considered as an explanation of the effects of the use of coloured filters and has been superseded by the magnocellular deficit theory reviewed above. As a consequence, the term “Scotopic Sensitivity” has largely been replaced by the terms “Irlen Syndrome” or “Meares-Irlen Syndrome”.

While there are many questions yet to be answered about the nature and dynamics of underlying visual processing problems and the influence of coloured filters on reading, it is now difficult to ignore the large and growing body of positive evidence on this subject. Professional organisations, such as the American Optometric Association, who make public comment about interventions and therapies in the field of special education have a responsibility to report all available evidence, which is certainly not the case in this particular instance.

Yours sincerely

Greg Robinson, PhD
Associate Professor
Special Education Centre
UNIVERSITY OF NEWCASTLE

REFERENCES


One of the roles of AASE, and thus of this journal, is to disseminate information about good practice in special education. One way we do this is by publishing research and review articles about special education in Australia. However, many practitioners have asked for more practical information, as well as these academic articles.

PRACTICALLY SPEAKING is a new part of Special Education Perspectives. It includes descriptions of programs, teaching resources and strategies, curricula, technology, school or classroom organisation, or other aspects of educational services to students with special education needs that illustrate good practice. We are looking for descriptions from practitioners about how they implement good practice. These contributions will not be formally refereed in the same way as the more academic content, however, they will be reviewed by the editor and others to ensure they do reflect good, research-based practice. As with refereed contributions, writers may be asked to make revisions to their contributions.

We are now calling for contributions to this section. Its success obviously depends on readers who are prepared to describe their experiences. Contributions may be of any length, from a short description of a useful resource to an article length description of a program. Detailed referencing is not required, although for some descriptions writers might like to indicate one or two sources from the research literature that supports the practices or procedures described. Support will be available to help with writing if you have a good idea, but are unsure about how to go about contributing it to the journal.

WHO TO CONTACT
If you would like to discuss a contribution, please contact
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DEVELOPING INCLUSIVE PRACTICES FOR DELIVERING THE CURRICULUM AT SINGLETON HIGH SCHOOL

Paul Hunt

THE RATIONALE
Classrooms in the secondary public school setting are increasingly being characterised as melting pots of diversity within the student population. It is a diversity that can be measured according to various terms of reference, including culture, ethnicity, socio-economic and sexuality. These all have significance for the teaching and learning process, but none has a greater impact on the achievement of learning outcomes than the relationship in the classroom between students and teacher as it is informed by the instructional capabilities of the teacher and the students’ capacities for learning.

Quality teaching requires that teachers be capable of enabling learning through positive and supportive environments and programs that draw on the individual capacities and interests of each student. Intellectual quality and student achievement stem from the provision of meaningful learning opportunities in classrooms that are caring, safe and nurturing. In order to do all this, teachers need to be able to use those strategies that research has validated as best practice. To this end, a professional development program was devised in which a central component was the development and deployment of a checklist of instructional technologies and behaviour management procedures.
THE PROFESSIONAL DEVELOPMENT PROGRAM

Aims
• To provide an opportunity for the classroom teacher to become more aware of approaches to teaching and learning that are informed by the principles of explicit and direct instruction, and non-aversive cognitive and psychological behaviour management.
• To initiate procedures that will enable the teacher to learn new methods of classroom and behaviour management that will allow greater confidence in his/her ability to deliver the full curriculum to classes where students exhibit challenging learning needs.

Procedures
This was an informal, faculty-based training and development program and included the following procedures:
• Discussion about and instruction in the elements of explicit teaching, direct instruction and applied psychology and cognitive theory that could inform the teachers’ approach to classroom management and program delivery.
• Negotiating and establishing a plan for the phased introduction of new techniques, as detailed in the checklist, into the teacher’s teaching and programming style.
• Encouraging the establishment of a mentoring relationship between the teacher and another, more senior teacher who:
  □ has one or more of the classes in question;
  □ might be having more success with the class(es);
  and
  □ is already employing some strategies that are known to be best practice.
• Provision of opportunities for these two teachers to discuss best practice (the checklist), to support each other’s implementation of strategies as yet untried, and for the junior teacher to observe the senior teacher in class.
Preparation and development
The teachers involved were assisted with the preparation of a four week unit of work related to their Key Learning Area. They were shown how to use curriculum analysis to break down the main syllabus objectives into a series of instructional objectives and learning outcomes. Once these had been identified, the teachers then organised the instructional objectives/learning outcomes into groups. These groups became the basis for organising each lesson within the unit of work.

It was at this point that the checklist was employed as a guide for program development. The teachers were further assisted in the deployment of explicit teaching, direct instruction, strategy instruction and differentiated instruction by professional development in the skill of task analysis. As a result, they were prepared before they went into the class for the differences in cognitive skill and understanding that characterised the class profile.

The plan for each 75 minute period involved dividing it into three 20 minute sessions which were geared towards the delivery of three discrete learning outcomes from the sequence. The extra 15 minutes allowed for flexibility within this timeframe, with at least five minutes being set aside for informal assessments, before the end of the period, of student understanding.

Further preparations for implementation involved the formation of streamed learning groups within the class, instruction and practice in the skills of group-based cooperative learning, and the cumulative development of a learning profile of each student in the class.

Observed outcome of the informal, faculty-based training and development program
This program was to be characterised as a short-term action research type project. It became, however, more of a long-
term project as the ideas in the checklist and preparations were phased in over a series of work units for a semester or more. It became a regular focus of staff room discussion as the teachers became more and more interested in the next phase of the development and implementation.

The teachers made a number of observations, amongst them were comments about:
• how they were experiencing fewer disruptive episodes from the more challenging students the more they implemented their changes;
• how they were developing a teaching and management rhythm in their classroom as the strategies they adopted corresponded more and more with the instructional steps outlined in the checklists; and
• how this style of teaching demanded more energy than they had been used to expending.

Participants reported that the students seemed to be more settled and happier in the class, and they attributed this to the fact that they themselves were more comfortable as teachers. The reason the teachers believed they were more comfortable was that they were better prepared for the diversity of the students. They highlighted the use of a wider variety of instructional strategies and materials and a more efficient use of time that made allowances for the various learning characteristics of the students. They also felt that their expectations of the students were more appropriate and that this was contributing to a better teacher-student relationship.

When asked to reflect on the impact of the project on the class and themselves, the teachers commented that they believed that the class had learnt more as a result of the changes they had made than if they had continued down the path they had
been going. They also thought that other classes not directly a focus of the project, including an HSC class, had benefited from the professional learning they had experienced.

**CHECKLIST OF AVAILABLE INSTRUCTIONAL PROCEDURES AND BEHAVIOUR MANAGEMENT TECHNIQUES**
The following instructional technologies are not exclusive of one another; elements of each are consistent with a structured teaching process that acts as a scaffold to students’ learning.

**Explicit teaching**
For each lesson:
- list the expected outcomes for the lesson for students to see;
- direct attention to the expected outcomes;
- establish a contract between yourself and the class involving logical consequences;
- have a list of positive and negative consequences on display, including restitution;
- direct attention to the natural consequences of meeting or not meeting the outcomes;
- display a list of study skills and appropriate behaviours that students are expected to use;
- direct attention to the skills and behaviours to be used;
- where appropriate, provide instruction in elements of and/or model the required skills and behaviours;
- establish an explicit teaching cycle involving demonstration, guided and independent practice, and active learner involvement;
- allow an opportunity for students to self-evaluate (Mercer, Jordan, & Miller, 1996, pp. 147-156).

**Direct instruction**
For each lesson:
- ensure the expected outcomes are achievable by all the students;
• ensure students fully understand what is expected of them;
• ensure students have the requisite skills and knowledge to continue with the lesson;
• review knowledge and skills developed by the previous lesson(s);
• provide further instruction, where necessary, on requisite skills and knowledge;
• establish a cycle of instruction: modelling — assisted practice — correction — independent practice;
• deliver instruction for each outcome that is brief and within the students’ zone of proximal development;
• model samples and non-samples derived from the instruction;
• make sure worked samples are clearly displayed for ease of reference during student practice;
• provide assisted practice which enables students to make concrete connections between the samples and the practice activity;
• provide immediate feedback that corrects and develops intrinsic satisfaction;
• allow a brief opportunity for independent practice;
• provide differing levels of difficulty for the practice exercises so that students in the class are extended at all possible levels of achievement;
• go through the cycle of instruction several times, if required, for each outcome until each outcome is achieved (establish a rhythm for the lesson);
• give a quick, achievable test of acquisition that provides immediate positive feedback and shows whether each student has achieved the outcome at his/her own level (Kinder & Carnine, 1991, pp. 193-213).

Strategy instruction
For each strategy:
• pretest to obtain a baseline regarding students’ skill and knowledge;
• establish a contract involving learning of a strategy;
• develop a generic strategy involving clear, logical steps and identifiable consequences;
• establish a strategy where the steps are modelled on the antecedent — action — consequence sequence;
• develop the steps such that a natural mnemonic is formed to assist the student with recall;
• use pictures or icons to assist students to recall the steps in the strategy.

For each lesson:
• describe the strategy steps;
• model the strategy by talking aloud about the thinking while performing the strategy;
• verbally practice the strategy steps until the student has memorised the steps;
• focus strategy instruction on where, when, why and how the student can use the strategy;
• use controlled practice and feedback;
• use practice work samples/problems that are achievable and allow for early success in the application of the strategy;
• provide students with opportunities to perform the strategy on ability-level, or easier, content;
• use feedback that is structured explicitly to move from teacher feedback to student self-evaluation;
• use advanced practice and feedback in which students perform the strategy on advanced, or grade-level, content, with feedback that promotes students’ self-evaluation;
• post-test using the same format as pre-test to allow student and teacher direct comparisons of student’s performance before and after use of the strategy;
• generalise use of the strategy to other academic areas of cognitive, psychomotor or affective learning (Hughes & Schumaker, 1991, pp. 205-221).
Cooperative learning
For each lesson:
• ensure students have the requisite skills and knowledge to work cooperatively;
• teach/review how students can work cooperatively and teach one another;
• establish heterogeneous but flexible groups that are sociometrically appropriate;
• provide a generic flowchart explaining the steps and procedures for working together for a common goal;
• assist groups to establish shared goals and rewards that promote interdependence within the group;
• design classroom management systems that maximise group learning;
• establish routines and procedures for:
  □ understanding what is expected;
  □ accessing and storing necessary resources and materials;
  □ seating, movement and seeking clarification;
  □ scheduling time, self-monitoring and reporting;
  □ teacher evaluations of groups and lesson;
• arrange the room enabling maximum use of space while keeping materials centralised by considering:
  □ the accessibility in the room of all necessary materials;
  □ the fixed features of the room;
  □ the functional relationships among areas (study areas and noisy areas);
  □ primary pathways (student traffic);
• develop efficient activity/time schedules that reduce downtime by considering:
  □ length of lessons;
  □ appropriate times of day for certain teaching and learning programs;
  □ time blocks for individualised and group instruction;
• develop a nurturing classroom climate that promotes self-actualisation as a learning habit:
  □ set expectations for the students that challenge them to achieve in their zone of proximal development;
  □ provide a degree of encouragement that promotes choice-making and responsibility;
• organise the classroom so that group work is enabled;
• select the cooperative strategy to match the goal of the lesson;
• select a task and goal that are achievable and enable the students to experience success in independent learning;
• sort desired outcomes for the task into essential, desirable and critical outcomes;
• design tasks around the sequence of differentiated outcomes so that:
  □ the essential outcome is the summarisation and/or illustration of factual information;
  □ the desirable outcome is the illustration and/or explanation of conceptual information;
  □ the critical outcome is the evaluation and/or prediction based on identified principles;
• allow opportunities for group and individual self-evaluation;
• design assessment tasks that reflect the outcomes achieved at the individual and group levels (Goor & Schwenn, 1993, pp. 1-6).

Differentiated instruction (Conway, 2001, pp. 262-306; Nolet & Tindal, 1994, pp. 1-2)
For each lesson:
• ensure expectations are clearly defined;
• be aware of and understand students’ needs;
• assess the instructional level of the students, noting the level at which comprehension of the spoken and written word is achieved;
• evaluate the instructional level of the material, noting readability according to difficulty of vocabulary and sentence length/structure;
• evaluate your own teacher instructional level as it relates to the students’ instructional level:
  □ complexity of language;
  □ teacher-centred versus student-centred learning;
  □ clarity of presentation;
• select the type of curriculum differentiation that is most suitable according to lesson content, expected outcomes and students’ needs, modifying the delivery of instruction or method of student performance by:
  □ accommodation that does not significantly change content or conceptual difficulty (e.g., the student is expected to complete fewer maths activities than the others);
  □ adaptation that changes the content or conceptual difficulty (e.g., student identifies main characters and setting while others identify plot, subplot, problem and resolution);
  □ parallel instruction that does not change the content, but does significantly change the conceptual difficulty (e.g., most students solving fraction problems while others work on counting from 1 to 10);
  □ overlapping instruction where student performance expectations in a shared activity are different or delivery of instruction changes content and conceptual difficulty (e.g., social skills is the aim for one student while the others have an academic goal) (Conway, 2001, pp. 279-293).
• decide whether to adapt existing materials, adopt alternate materials, create new materials, or use a combination;
• adapt the material instructional level by:
  □ sorting vocabulary into essential, alter or delete categories;
  □ simplifying vocabulary and sentence structure;
  □ reducing the contents of each page/worksheet;
ensuring print is clear and well-spaced;
- preview of and instruction on difficult words and their meanings;
- altering readability during oral reading;
- regularly questioning student comprehension;

• choose the appropriate content to be included in adapted or new written material;
• divide knowledge in a topic into must know (essential), should know (desirable), and could know (critical);
• design tasks around essential information that seek summarisation and/or illustration of factual information;
• design tasks around desirable information that seek illustration and/or explanation of conceptual information;
• design tasks around critical information that seek to evaluate and/or predict based on identified principles;
• design assessments that reflect lesson content and assess what the students have attempted (Conway, 2001, pp. 279-293; Nolet & Tindal, 1994).

Applying cognitive and psychological behaviour management techniques (Meyer & Evans, 1989; Becker, 1986)

For each lesson:
• discuss the rules of the school;
• identify appropriate, pro-social behaviours circumscribed by the school rules;
• establish the general aims and objectives of the school and class;
• identify the appropriate behaviours requisite for achieving class-based aims and objectives;
• negotiate a simple set of class rules, rewards, sanctions and restitution;
• negotiate individual contracts, as appropriate, based on the set of class rules, rewards, sanctions and restitution;
• determine target behaviour to be eliminated, replaced or introduced;
• develop contracts around the content-related core learning outcomes expected from each lesson;
• set behavioural objectives that are flexible and achievable;
• incorporate a set of two or three choices within each contract that stipulate possible actions and associated consequences;
• implement a system of positive reinforcements according to the students’ behavioural needs:
  □ immediate versus delayed gratification;
  □ sensory stimulation versus token and bartering;
  □ fixed-ratio reinforcement or intermittent reinforcement schedules;
• design and teach a self-instructional cognitive strategy that guides the student to adopt the objective behaviour;
• discuss current inappropriate behaviours and identify self-monitoring cues for enacting the self-instruction strategy;
• design a flowchart for each student that shows the relationship between cues, action and reinforcements (rewards/sanctions);
• use simple positive statements, icons or pictures and, where possible, mnemonics in the flowchart;
• build into the reinforcement schedule methods:
  □ of self-evaluating performance;
  □ for measuring progress towards rewards;
• establish a teacher cueing system that augments the students’ cueing schedule;
• draw the student’s attention to the flowchart, his/her cueing system and the expected outcomes for the lesson;
• ensure that the students experience success in the early stages and receive some positive reinforcement;
• support the student’s replacement or acquisition of the target behaviour by demonstrating the strategy using stream-of-conscious talk;
• provide students with opportunities for controlled practice leading to reinforcement;
• provide opportunities for independent practice resulting in reinforcement;
• design tasks that require use of appropriate behaviours to solve problems and make choices;
• create opportunities for discussion of self-control, choices and responsibility;
• build fading of teacher support, dependence on the flowchart and reinforcements into each contract.

DESIGNING EFFECTIVE TEACHING INTERVENTIONS (adapted from Arthur, 2001, pp. 139-164)

Individualising curriculum and instruction
• Identify curriculum priorities and long-term goals (Arthur, 2001, p. 146):
  □ Identify specific areas of need for an individual student in the context of the KLA.
  □ Refer to the Individual Education Plan for statements of target curriculum areas and intended learning outcomes.
• Use curriculum-based assessment in the design and implementation of a teaching program:
  □ Identify the scope and sequence of the curriculum (Arthur, 2001, p. 150):
    a. Analyse the curriculum showing what the learner should be able to know and do.
    b. Sequence the content and skills in a logical order.
  □ Divide content into a sequence of modules that are linked to each other and not taught on a rigid timeline.
  □ Establish learning as cumulative where material taught previously and reviewed serves as a base for new skills and content.
  □ Use the Task Analysis procedure to break down a task into its component parts:
a. Identify the knowledge, concepts and facts that make up content.
b. Identify the strategies for working with the content.

☐ Apply the task analysis:
   a. as an assessment device to pinpoint the area of need;
   b. to guide the writing of appropriate teaching objectives;
   c. to clearly identify the teaching sequence;
   d. to guide the teacher in the delivery and adjustment of instruction that builds on previous learning.

☐ Assess the current performance level of the student on the curriculum (Arthur, 2001, p. 153):
   a. Assess the learning process (how the student performed the task).
   b. Assess the learning outcomes, collecting information about student performance in terms of actual behaviours and permanent products.
   c. Evaluate the stage of learning in which the student appears to functioning (acquisition, fluency, maintenance and generalisation).

• Apply Mastery Learning principles to the design and establishment of short-term instructional objectives:
   ☐ Develop a series of objectives that reflect the specific learning needs of the individual.
   ☐ Ensure that small progressive steps are built in to the learning program.
   ☐ Design a very clear statement of intended student performance.
   ☐ The statement will be explicit about who will, under what conditions, achieve which outcome and the criteria for achieving successful performance.
■ Ensure adequate time is available for the individual to master target content and avoid failure in the curriculum.
■ Regularly check the quality of student performance against the objective(s).
■ Use formative, ongoing assessment to guide teaching decisions, including corrective instruction.

• Introduce effective instruction, choosing from the array of teaching technologies available:
  ■ Cooperative learning techniques
  ■ Direct instruction techniques
  ■ Explicit teaching techniques
  ■ Strategy instruction techniques
  ■ Cognitive and metacognitive instructional techniques
  ■ Computer-assisted instruction peer tutoring
  ■ Peer tutoring

• Actively monitor student progress and adjust program features in the light of progress data (Arthur, 2001, p. 160):
  ■ Use observation records, work samples and probes to check whether instructional objectives are being attained.
  ■ Use data to determine further teaching directions:
    a. Introduction of a new or revised student objective.
    b. Conduct of a further task analysis of skills or content to be learnt.
    c. Change teaching strategies employed.
    d. Cancel the program.

SUGGESTED FURTHER READING

General

**Explicit teaching**

**Direct instruction**

**Strategy instruction**


**Cooperative learning**

**Differentiated instruction**

Cognitive and psychological behaviour management techniques


Designing effective teaching interventions
Practically Speaking

A VEGETABLE STALL TO TEACH FUNCTIONAL SKILLS

Anne-Louise Baker with Jennifer Stephenson

Holroyd SSP enrolls students with moderate to severe intellectual disabilities, many of whom have additional disabilities. It has a commitment to teaching functional skills to these students, within the context of the NSW Board of Studies Life Skills Curricula. One functional activity that has been developed for senior students is based around a vegetable stall. The stall operates every Tuesday and sells vegetables to school staff.

Every Monday morning, a group of seven students travel in a school mini bus to Flemington Markets with their teacher (Annie Baker) and teacher aide (James Alley). The students’ ages range from 15 to 18 years and they are in either Stage 5 or 6. Two of the students have a moderate intellectual disability, and five have a severe intellectual disability. As the students are in their final years of schooling, the program has been designed to support possible vocational avenues, as well as addressing living, communication and academic skills to meet the needs of both current and future environments.

While at the markets, with the support of school staff who decide which items and what quantities to buy, students purchase a range of vegetables and load them onto the bus for transport back to school. Stallholders and students have established a rapport with each other, and this has provided a context for developing social skills, in addition to purchasing and packing skills. Students have learned to greet stallholders by name, and
to ask stallholders for advice on which vegetables are in season and therefore selling at a good price. Initially, stall holders had to be encouraged not to provide unnecessary assistance, such as offering to carry produce over to the bus and load it for the students. Fortunately, after much practice, the students are confidently loading the bus themselves, ensuring the heavier items are loaded first and the more fragile vegetables loaded last, to prevent damage.

Back at school, students unload the bus and carry boxes of produce back to their classroom, or load them on a trolley to push to the room. On the day I (Jennifer) visited, they had bags of onions and pumpkins, boxes of avocados and broccoli, tomatoes, snow peas, capsicums and other vegetables.

Once back in the classroom, there is a quick discussion and review of the produce brought, supported with pictures for students who benefit from the use of augmentative and alternative communication (AAC) supports, to teach vegetable names and general recall of the event. Then students choose which vegetables they would like to pack for the stall the following day. As there are a range of abilities in the class, a range of supports are provided for packing. For example, during my visit two students were independently counting out the required items (two ears of corn; four large and four small onions) and placing them in bags. Other students packed bags with the support of a set of cups. One tomato or capsicum was placed in each cup, and when all cups had an item the vegetables were packed into a bag. Two other students were using a household scale and learning to weigh out quantities of snow peas, before bagging them. Students who can use a calculator assist with the calculations to determine the selling price of goods. The aim is to cover the costs and make a little extra profit for the class.
Once the vegetables are bagged, student use a bag sealing machine to seal the bags and share this tool among the group. Some students have learned to use a pricing machine and place price stickers on the bags ready for sale. In addition, students complete sale signs by placing Picture Communication Symbols (PCS) on a laminated sheet and writing the quantities in each package and the price of each package. Two additional teacher aides, as well as the class teacher and aide support the packaging and pricing session. This allows for individualised teaching of skills (such as counting, weighing and pricing) rather than just getting through the packaging.

On the following day, students sell the produce to school staff at the vegetable stall. Students carry or wheel out on a trolley the packaged items and set up the stall outside the staff room. Student responsibilities are organised by a rotating roster, with a maximum of three students working or running the stall at one time. Areas of responsibility include providing carry bags or boxes for staff to carry their purchases, adding up sales, managing the cash tin and writing IOUs in the “credit book”.

School staff purchase items during their morning tea break. Class staff provide support for the students as necessary, although a calculator often solves problems in working out cost, the change needed, etc. At the completion of the stall, any unsold vegetables are returned to the classroom to be either sold at a later date or disposed of in the school compost. Empty boxes are taken to the school dumpster and the money in the cash tin is counted. IOUs are tallied and if they are not paid within a week, students provide reminder notes for staff still owing money.

The progress the students have made over just two school terms has been consistent. Students have made considerable gains in their ability to recognise a variety of fruits and vegetables, count
items with and without supports, estimate approximate weights, use household scales, follow basic hygiene rules when working with food, read price tags, tender money and understand the basic concept of exchanging goods and services for money. The students display a great deal of enthusiasm when participating in the program, on-task and in-seat behaviour has increased significantly, and students are demonstrating their ability to listen and follow directions.

The money raised from the stall goes towards the purchase of produce for the next week and packaging materials. Students record profits on a chart displayed on the classroom wall. The profits will be used to subsidise a school camp later in the year and perhaps buy additional resources for the school.
ABSTRACT
This brief report describes the rationale, methodology and broad conclusions drawn from a small scale pilot study conducted in two local NSW schools, designed to investigate the broad question of how teachers support students in the diverse primary classroom. Attention was centred on the level of student engagement produced under different instructional conditions, and practical aspects of this type of research. It concludes that answering that question is complicated and challenging, and provides some suggestions for further research in this area.

INTRODUCTION
As increasing numbers of students with diverse needs are included in regular classrooms, the professional expectations of teachers continue to expand. The typical classroom now includes students of average ability, as well as those who are gifted and talented, have a learning or behaviour difficulty, or a particular intellectual, physical, or sensory disability. To this end, many teacher preparation programs focus on the practical skills and knowledge required to identify the diversity of student learning needs and address them appropriately in the regular classroom. At a broader level, systemic resourcing processes, such as the specific State and Commonwealth funding programs, aim to provide more equitable and targeted in-class support for teachers who have students with special needs in their classroom.

Despite the presence of an impressive body of literature about the principles and strategies of effective teaching (for example, Good & Brophy, 2000; Killen, 1998), there is little comprehensive Australian data that tracks and integrates student learning outcomes, classroom contexts, teacher behaviours and management practices in the heterogeneous classroom. In one recent contribution, the Queensland School Reform Longitudinal Project (Lingard, 2001a; 2001b) explored and described a wide range of social and cultural factors which influence the
modern classroom, including the recognition of difference as observed in curriculum content and teaching pedagogies employed.

However, there is a need for specific classroom data on the potential relationship between individual student learning outcomes, teacher factors, such as instructional focus, and a variety of classroom contextual variables, including classroom materials and approaches to grouping. Such data has the potential to better inform teacher practice because it will relate a number of teacher-controlled variables to relevant student outcomes. Specific questions that could be addressed include:

- Do teachers differentiate curriculum content and instructional practices in order to support the intellectual engagement of students of varying ability levels and, if so, what are the learning outcomes?
- Is it possible to identify classroom management practices that are associated with higher levels of engagement amongst students with different ability levels?

These questions are especially pertinent for teacher educators. Every semester early childhood, primary and secondary teachers prepare for a career of work in diverse classrooms, by focusing both on their attitudes and expectancies, and their skills in addressing individual needs in complex situations. And yet, in the teacher practice literature, there appears to be little hard data, especially in the Australian context, to support the case for differentiated curriculum and instruction. Indeed, there are concerns and debates about the concept and definition of differentiation in the first place (Westwood, 2003). So what lessons can be learnt from the current literature, and what are the practical aspects to consider when gathering data on classroom teaching and learning processes?

In a study of Dutch secondary classrooms, Roelofs and Veenman (2000) identified several important relationships between the amount of on-task time exhibited by students of varying ability levels and the type of class (heterogeneous or streamed) in which they were placed. For example, these authors found that the amount of observed time on-task during individual seatwork was higher in more homogeneous classes (one or two stream classes), when compared with classes that included four streams of student ability. In their study of American regular primary classrooms that included students with intellectual disabilities, Logan, Bakeman, and Keefe (1997) provided observational evidence of an association between higher learner engagement and independent, one-to-one and small group teaching arrangements, when compared with whole group instructional practices. Logan et al. (1997) used the MS-CISSAR instrument, a set of coding protocols developed for use in observing students with special educational needs in regular classrooms (Carta, Greenwood, Schwartz, & Miller, 1990).

Westwood (2001) has argued that the concept of multi-level, or differentiated teaching is very difficult to achieve in a class of thirty students. In this discussion, the term differentiation
is used to refer to the selective and strategic introduction of curriculum materials, teaching practices and environmental arrangements aimed at the support of individual learning processes. Westwood suggests that a better approach may involve teaching all students the same material, with varying amounts of assistance. Future research would do well to explore this suggestion.

In the context of this literature, and in light of the exploratory focus of this project, a methodology for observing and understanding differentiated and undifferentiated teaching practices in primary classrooms was trialled, allowing discussion of the practical challenges that were encountered.

After a lengthy analysis of the relevant empirical literature, the MS-CISSAR (Carta et al., 1990) was selected for the study, with minor adaptations in the areas of teacher focus, activity and task. The MS-CISSAR has been extensively used in studies of classrooms that include students with special needs (see, for example, Logan et al., 1997; McDonnell, Thorson, McQuivey, & Kiefer-O’Donnell, 1997). However, the methodological orientation of the project reported here meant that ongoing refinement of this tool was necessary in Case Study One and Case Study Two, resulting in the categories and codes described in Table 1.

**Case Study One**
Two primary schools in the Newcastle area agreed to participate after discussions between members of the research team and the school principals. Using several criteria for differentiation in curriculum content and teaching and learning processes discussed by Westwood (2001), the research team informally established that a Year 4 classroom in School 1 had a low level of differentiation occurring, and the Year 4 class in School 2 had a high level of differentiated practice.

Information letters were sent by the two principals to the parents of all students in the two participating classes. Class teachers identified participating students as high, average or low reading achievement, and selected two for each group based on reliable school attendance and best-fit for each category.

The observational recording procedures used in Case Study One (based on the MS-CISSAR) were planned on a cyclical basis for the six target students, observed in rotation in the naturalistic classroom. This approach contrasts with the more conventional use of the MS-CISSAR in tracking one student with special needs in a classroom for extended periods of time. Five observers were trained in the use of the observation protocols for two 3-hour clinical sessions and two 1-hour field training sessions at a local primary school.

A momentary time sampling procedure was used, cued by an initial headphone signal via a portable compact disk player. Each observational cycle consisted of a 10-second period to scan the room for the target student and a 30-second period for momentary observation
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and recording of codes. After 40 seconds, the same cycle began for student 2, and so on. Six students were observed in rotation during one interval set. The total time for one interval set was 4 minutes and the total duration of observations in one literacy lesson was 44 minutes. Each student was therefore observed 11 times in each lesson. Observations were planned for ten lessons in each classroom.

The results for this first study suggested that the MS-CISSAR was not an appropriate instrument for use when attempting to understand differentiated classroom practice. As noted earlier, it was designed for use in better understanding the experiences of one target student over a sustained period of observation. For example, in Class 2 (high differentiation) the student variable of academic response (comprising codes for writing, task participation, reading aloud, reading silently, talk academic and no academic response) reflected no important differences in the estimated frequencies for students of varying abilities.

**Methodological Issues**

Several methodological lessons from Case Study One are noteworthy. The first of these relates to the importance of extensively trialling observational procedures in order to identify how much information can be collected using the protocols. For example, in Case Study One, 11 data points per student per lesson was inadequate and led to the collection of unuseable data. It is not possible or appropriate to draw meaningful conclusions about teaching/learning processes from such a small data set. Second, adapting tools that have been used successfully for one purpose and in one type of context necessitates a long-term program of inter-observer training and checks, if useful information is to be gathered. In this study, coding multiple students in a cyclical approach was ambitious and impractical. Third, the observers encountered great problems with proximity. On the one hand, it was vital to be close to the target student (and be able to move near them), in order to observe student and teacher behaviours in close proximity to the student. On the other hand, such tracking compromised the anonymity of the student, and may have resulted in changed behaviours by students and teachers as a result of the close attention. As Table 1 indicates, the codes allow for the analysis of several teacher, student and ecological variables, and the descriptive range and novelty of observer presence may have produced data that did not reflect reality.

Consequently, in Case Study Two one student was tracked intensively, consistent with the original purpose of the MS-CISSAR, and data was compared in two types of contexts.

**Case Study Two**

This follow up study attempted to understand the methodological issues pertaining to the reliable and valid observation of differentiated practice in classrooms. Following the appropriate consent processes for staff and students, a student with low reading achievement was identified in each of the two Year 4 classrooms in the participating
schools. Using the same 10 + 30 second recording process (momentary time sampling), each target student, their teacher and Year 4 classroom were observed for 10 literacy lessons, following the categories listed in Table 1.

The data that was collected in this follow-up study suggested that the adapted MS-CISSAR was not appropriate for distinguishing curriculum content and teaching/learning processes in classrooms with varying levels of differentiation. It appeared that there were only three categories in which there were important differences between the two targeted students. These were teacher behaviour (specifically, question academic, talk academic and attention), teacher focus and the ecological variable of instructional grouping. Anecdotal data from observations suggested clear differences between the learning environments of the two classrooms, yet this was not reflected in the data obtained.

Methodological Issues
As in Case Study One, several issues were identified for consideration in the design of future investigations. The first problem was alluded to above and related to the proximity, anonymity and identification of students. If this type of investigation is extended, it will be vital to have a pool of target students and ensure that the teacher is unaware of which person is being observed. This will mean scrutiny from further away, and may result in less information about the specific nature of the task the student is engaging in. The 10-second period for identifying the target student should allow the observer to scan the whole class without disclosing to peers or students who they are watching. This will be a priority in future training of observers. Second, there were procedural problems with the concept of the “moment” of observation after the second cue. It may be useful to explore a modified interval format, whereby the predominant condition in a brief period is coded, rather than using the momentary sample approach.

CONCLUSION
Observational recording is, at once, a complex and time-consuming process, as well as a necessary and informative research methodology. These case studies reflect the problems encountered when live coding was used to describe what happens in the diverse primary classroom. It is hoped that these experiences may stimulate further consideration about complementary approaches to studying what happens in classrooms and, more particularly, what occurs for students with varying learning trajectories. The need for measurement of student learning outcomes, along with the collection of observational and other forms of data in typical classrooms, is critical. Perhaps this brief report will be a stimulus to further research focus in this challenging area.
REFERENCES


CLASS SIZES, TEACHER QUALITY AND POLITICAL EXPEDIENCY IN NSW

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ABSTRACT
This paper examines the education policies pursued by the two major political parties in the lead up to the 2003 NSW State election. The education debate was dominated by promises to reduce class sizes for a group of students in government schools. The efficacy of this education policy is examined in terms of its political expediency, its ethical soundness, the potential for it to produce improved educational outcomes for school students, and the role of stakeholders, such as the NSW Teachers Federation, in influencing this policy and the wider education agenda.

INTRODUCTION
School education continues to be one of the community’s major concerns in the development and maintenance of a just and equitable society. Consequently, along with health and law and order, education is one of the “big ticket items” of public expenditure and it is one of the issues that tends to dominate political debate, particularly in the lead up to elections. Despite a significant drift from public to private schools in the past decade, public education in NSW continues to be the pre-eminent player in school education (Noonan, 2001). The NSW Department of Education and Training is the largest employer of teachers in Australia, with over 40,000 teachers working in over 2,200 public schools (Audit Office of NSW, 2003).

Recent education reform in NSW and other States has resulted in increased scrutiny of educational outcomes in both public and private education. The Commonwealth’s Literacy and Numeracy Program requires schools to conduct annual standardised testing of school students and the implementation of policies by the states to maximise the number of students achieving benchmarks in several curriculum areas. At the same time, community concerns have also developed about behaviour and social problems in NSW schools, the educational performance of Indigenous students and other minority groups, and the inclusion of students with a disability in regular schools.

Clearly, there are a variety of education issues that have captured the NSW public’s attention...
in recent times. However, the public is just one player in the process of education reform. Other significant players are the NSW government and the union that represents teachers working in NSW government schools. The relationship between these players, and their relative impact on education policy, is now discussed within the context of the last NSW State election.

**Education policies in the 2003 NSW election campaign**

The two years prior to the State election saw unprecedented activity in the scrutiny of public education in NSW. The Ramsay (2000) review of teacher education recommended significant improvements of the professionalism of teachers, including the development of teaching standards and teacher certification. Another major initiative was an inquiry into NSW public education, auspiced by the NSW Parents and Citizens Association and the NSW Teachers Federation. The report from this inquiry made wide-ranging recommendations, including reduced class sizes, significant increases in teachers’ pay, and increased opportunities for professional development (NSW Public Education Inquiry, 2002). In addition, the NSW Teachers Federation had mounted an extensive advertising campaign during 2002 highlighting class sizes as an issue.

In response to this activity, the NSW government agreed to provide a trial of reduced class sizes in infants’ grades in selected schools from the beginning of 2003. Despite some international research support for reduction in class sizes (Biddle & Berliner, 2002; Haenn, 2002), the Education Minister, John Watkins, argued that the research results were equivocal and that further data needed to be collected. He was quoted as saying, “the jury is still out on the impact of class sizes … and you can’t reduce [class sizes] to 20 without it meaning a huge increase in the number of teachers” (Doherty, 2002a).

At this time, the NSW Department of Education and Training staffing formula specified that kindergarten classes need not exceed 26 students, while for Year 1 and Year 2 the upper class sizes were listed as 28 and 29 students, respectively. However, the Department had not collected data on class sizes for several years and, in response to media attention on the issue, decided to conduct an audit. Meanwhile, a NSW Teachers Federation survey of primary class sizes in February 2002 found that 24 per cent of kindergarten classes did not meet the Department’s guideline. In comparison with other states and territories, NSW maintained some of the largest class sizes in Australia (Doherty, 2002a). Not surprisingly, the trial of reduced class sizes in Years K–2 was criticised by the Opposition, the NSW Teachers Federation, and the Federation of Parents and Citizens Association, who described the policy as “a poor substitute to real action” (Doherty, 2002b).

By September 2002, class sizes loomed as an election issue with the State Opposition leader, John Brogden, saying he was convinced that smaller sizes in the first three years of school were beneficial and would be a “worthy heritage we could leave NSW” (Doherty, 2002c). This was reinforced by the announcement of a
$550 million program to reduce class sizes by the Opposition in November of that year (Wainwright, 2002).

The results of the Department’s audit on class sizes was released in November and showed that up to 23 per cent of infant classes exceeded the recommended upper limit of 26 students. The Education Minister described the results as “highly positive … with classes averaging 26.5 students and 80% of classes receiving some sort of specialist teacher support, it's no wonder that NSW students are doing so well” (Doherty, 2002d).

By now, the issue of class sizes had sufficient momentum to guarantee that it would figure prominently in the election policies of the two major parties. Regardless, there were some dissenting voices and sobering statistics about the relative importance of class sizes in improving educational outcomes. Late in 2002, the United Nations Children’s Fund released a report on educational disadvantage in Western countries. Among other things, it found that children’s academic success is more a product of their home life, and the job, schooling and economic status of their parents than school funding and class size (United Nations Children’s Fund, 2002). Earlier, McGuinness (2002) argued that there was no obvious case for reducing class sizes because Australia’s ratio of school students to teachers is comparable to similar OECD countries.

By early March 2003, the Education Minister was still holding out on making an announcement on class size reductions. He was quoted as saying “the research says … it’s more important to have quality teaching than smaller class sizes for educational outcomes” (Doherty, 2003a). However, it was becoming increasingly difficult to maintain this position. The Opposition’s Education spokesman, Barry O’Farrell, claimed that if Labor did not match the class-size policy, voters would ask, “where are their priorities?” In addition, public polling showed that class sizes and discipline in schools were the highest priority issues (Doherty, 2003b). By mid March the pressure was too much, and the Government announced that it would match the Opposition’s class size policy (Doherty, 2003c). Several weeks later the Labor party was returned to government with an increased majority.

Class sizes and educational outcomes
No doubt the reduced class sizes that will flow from the State election will bring some relief to teachers. While it is beyond the scope of this paper to review the literature on class size, the efficacy of reduced class sizes, in comparison to other strategies, in promoting educational outcomes is suspect (Ehrenberg, Brewer, Gamoran, & Willms, 2001; United Nations Children’s Fund, 2002). As Ken Rowe, a principal research fellow at the Australian Council for Educational Research, eloquently put it, “… unless they get the issue of teacher quality right, its like pissing into the wind. No matter what measure you use, socio-economic background of students or gender or the physical surroundings of the school, they pale into insignificance when you consider the quality of teachers” (Noonan & Doherty, 2003).
Advocates of reducing class sizes cite a number of “gold standard” programs to support their claims. The most widely reported of these studies include Project STAR (Student Teacher Achievement Ratio) in Tennessee (Boyd-Zacharias & Pate-Bain, 2000), SAGE (Student Achievement Guarantee in Education) in Wisconsin (Molnar et al., 2001), and the California Class Size Reduction (CSR) project (Stecher & Bohrnstedt, 2001). However, the research evidence of a significant relationship between class size reduction and improved student outcomes is equivocal. As Buckingham (2003) explains:

Much of the research is flawed in ways that make it unreasonable to expect the same results in a real-world situation. Many studies have introduced other reforms at the same time as class size reduction, making the effect of class size alone impossible to determine. In most cases those participating in the experiment were motivated to produce positive results. Only a minority of studies found any positive effect of smaller classes on student achievement, usually in classes of less than 20, and few of these effects were large. (p. 15)

**Teacher quality and ethics in government policy**

Several weeks after the State election, the NSW Auditor-General released a report on teacher performance (Audit Office of NSW, 2003). The report acknowledged that some welcome changes occurred in the assessment of teacher performance following the introduction of the 2000 teachers’ award. However, it also argued that significant additional changes were required.

The main concerns from this report were that there are no performance standards for teachers in NSW on which to base the assessment, that high school principals typically delegate responsibility for assessment to head teachers, which may create a conflict of interest in the process, and that unless teachers are identified as requiring to join a teacher improvement program, the only possible rating for teachers following assessment is “efficient”. The implication of the latter concern is that apart from the 174 classroom teachers (0.4 per cent) identified as experiencing difficulties with their performance in 2001, all remaining teachers who were eligible advanced up the pay scale without a demonstration of improved teaching or of significant professional development. Seventy per cent of NSW government teachers are at the top of the pay scale (Audit Office of NSW, 2003).

The NSW Department of Education and Training argues that many of the Auditor-General’s concerns are being addressed (Totaro, 2003). Both the Minister and the Director General of the Department pointed out that the government has established an Interim Committee for a NSW Institute for Teachers (2003), which is beginning consultations on developing professional standards and an accreditation process for teachers. This initiative developed out of recommendations from the Ramsey Review of Teacher Education. In addition, the
Department has begun an extensive program of professional development for its staff on a new model of pedagogy it has recently adopted (NSW Department of Education and Training, 2003).

An intended outcome from the operation of the NSW Institute of Teachers will be the development of a well-trained workforce, able to make decisions in the classroom and beyond, that will be in the best interests of school students and the wider public. From this perspective, the Institute will be about promoting virtue ethics, a form of ethics that has had a considerable impact on social policies in the past few decades. Virtue ethics stresses “… the kind of moral abilities that put us in a position to act morally, whether after weighty deliberation or as a quick reaction” (Grace & Cohen, 2001, p. 19). Teachers’ moral behaviour will be the result of, and develop from, their character and values as described in professional teaching standards. This resonates well with community expectations of teachers with regard to child protection and other duty of care issues.

Virtue ethics and other non-consequentialist approaches (i.e., those not aligned to short-term products or outcomes) to teaching quality may also fit well with contemporary thinking about students’ rights to receive a fair and equitable education. A contractualist view would see teachers formally agreeing to follow a set of principles as a condition of their employment. Examples of principles that may develop from this approach are accepting responsibility for the learning needs of students with a disability in regular classes. However, embracing non-consequentialist approaches involves considerable political risk. One significant risk is that the expected positive outcomes from such policy initiatives (e.g., improved student performance, reduction in severe behaviour problems) will not surface for some time. Political debate in this country has conditioned the public to focus on short-term consequentialist outcomes, such as increasing the number of special schools for students with behaviour problems without addressing some of the conditions in schools that may be contributing to these problems (e.g., quality of instruction, relevance of curriculum, adequacy of welfare supports).

There have been some notable exceptions to this form of political decision-making. For example, John Howard’s stance on gun control following the Port Arthur massacre, and Federal government policy on business competition, are based on the moral principles of protection of human life and the enhancement of choice for consumers, respectively. However, these exceptions also have a number of useful short-term consequences. In the examples given, these were an increase in public confidence about their personal safety, and a deterrence of collusion and other unfair business trading practices.

In addition to the risk that non-consequentialist approaches to policy on teaching quality will not produce short-term benefits, there are also risks in the way in which some stakeholders may respond. These risks may not be apparent for parents and students who could respond
favourably to policy initiatives in this area. However, based on past experience, the position of NSW teachers and the union that represents them is likely to be much less supportive of education reform than other stakeholders.

**Union influence on the NSW education agenda**

Up until the early 1990s, membership of the NSW Teachers Federation was a requirement for employment with the NSW Department of Education and Training. This has resulted in the union continuing to maintain membership with the vast majority of teachers in public schools in NSW. In this respect, the union is unique in comparison to other industries where there continues to be union concern about low and falling membership levels.

Throughout the past decade, the Federation has shown that it exerts considerable influence over education reform in NSW. Two examples illustrate this well. The first relates to a change in government policy in the mid 1990s on the enrolment of students with a disability in regular schools, and the degree to which regular class teachers should support such students (Dempsey, 1997). A common enrolment policy for all students, which replaced a separate policy for students with a disability in regular schools, was strongly opposed by the Federation who argued that it eroded teachers’ professional rights to make decisions about the placement of students. A professional development program, designed by the Department to assist teachers to support students with a disability in regular schools (NSW Department of Education and Training, 1999), was boycotted by the union when it was to be introduced in 1999.

A second example of union opposition occurred during an extended and politically damaging standoff over salaries and working conditions in 1999. The government introduced a reform package that included increased scrutiny of teacher effectiveness and clear mechanisms for dismissing teachers found to be unsatisfactory. As discussed earlier, the government eventually agreed to a “watered down” process of establishing teacher effectiveness that has been widely criticised (Audit Office of NSW, 2003).

A level of defiance by Federation to the Department is shown in comments from a recent issue of the Federation’s magazine. Smith (2003, p. 23) argued that “the qualification to be a teacher will be decided by the Institute and not by a capricious Department of Education and Training attempting to undermine teachers in the middle of a salary case”. In addition, it is clear that there will be resistance to change the current “in house” arrangements for reviewing teacher quality, because “no teacher seeking re-registration should have to submit to external inspection or assessment” (Smith, 2003, p. 23).

**CONCLUSIONS**

As one might expect in election campaigns, the education policies developed by the major parties were utilitarian in nature, seeking to maximise the benefits and to reduce the costs for the public and themselves. Class sizes are a useful example of the application of this ethical principle. At face value, the benefits
of this policy were substantial for a variety of stakeholders. They include perceived payoffs for school students and teachers for enhancing students’ outcomes and for reducing the potential for academic and social problems to develop. Another benefit for the Labor party was that the adoption of a policy on class size later in the campaign that was identical to the Liberals, effectively evaporated any advantage the Liberals may have had and left the Opposition with nowhere to go on this issue. The costs of this policy were constrained by an agreement by both the parties that a reduction in class sizes would be limited to students in infant grades.

The extent to which the direction on class sizes pursued by the major parties was morally sustainable is worth discussing. It is difficult to argue that the parties have “dirty hands” because a crucial aspect of this ethical condition is absent. This is that negative responsibility has not played a part in the decision-making process, or as Cunningham (1992) puts it, evil was not aimed at to prevent some greater evil coming about. Regardless, the policy seems to be bankrupt because although it developed from sustained pressure from a number of interest groups, evidence-based practice and research shows that class size may not be a significant variable in the enhancement of educational outcomes, and because the policy initiative will cost over half a billion dollars. The policy was certainly populist, and the Liberals were the first to seize on this and to take advantage of it. That Labor did not continue to “hold the line” and maintain its trial of reduced class sizes in selected schools suggests that the motivation for its change of policy was not educational outcomes, but short-term political motives.

No doubt, Labor would justify the change of tack on class sizes as a legitimate vehicle to match Liberal policy, to retain government, and to then permit itself to continue with the process of education reform, including enhancing teacher quality. Bandura (1990) discusses this approach in terms of displacement of responsibility. That is, backing away from a well-reasoned trial of class size reduction was justified, despite the lack of evidence for its relative efficacy, because the Liberals’ advantage in this area had to be negated. This position may have some legitimacy if one could be confident about the government’s record on improving teacher quality. However, as discussed earlier, the prospects for significant improvements in teacher quality in NSW public schools in the short to medium term are poor, because the changes will be vigorously resisted by the NSW Teachers Federation, and because the government has tied up significant funds in reducing class sizes that it may have gainfully used to entice reform.

The Federation has demonstrated that it is a formidable obstacle in the process of education reform in NSW. In the current context, the Federation will likely endorse the professional standards that will develop from the NSW Institute of Teachers because the Institute is seen by the union as an organisation separate to the Department of Education and Training. However, we can expect that the Federation will oppose any certification requirements on teachers that are likely to make it easier to identify and to dismiss teachers who are not
meeting professional standards. The challenge for the State government is to negotiate some reform with a union that has shown that it will resist change that does not meet the self-serving interests of its members.

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THE ROLE OF ACTION RESEARCH IN LEARNING SUPPORT: A CASE STUDY

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ABSTRACT
This case study investigates the cyclical nature of action research and its impact on in-class learning support. It illustrates the implementation of action research in a single classroom environment as a method for promoting teacher learning and improving outcomes for a student with learning and behavioural difficulties. In-class support encouraged greater understanding of the context in which students with learning and behavioural difficulties operate, and the culture of collaboration that emerged had a positive impact on the regular class teacher and the learning support teacher.

Action research is a valuable approach that facilitates improved teaching practices and promotes productive learning environments. It enables the teacher to understand what happens in the classroom and enhances the probability that a given curriculum, instructional strategy or technology will improve student outcomes (Mills, 2000). It helps identify the critical moments in the learning process and the point at which the teacher should intervene to facilitate this process (Nixon, 1981). Teachers are able to respond more sensitively to student need in terms of their classroom interactions and curriculum planning. Action research can empower teachers and results in a greater willingness to take professional risks (Ross, Rolheiser, & Hogaboam-Gray, 1999).

Action research is defined as a “systematic inquiry done by teachers (or other individuals in the teaching/learning environment) to gather information about and subsequently improve the ways their particular schools operate, how they teach and how well their students learn” (Mills, 2000, p. 21). It is referred to as a “process of change which recognises that teaching and learning take place between and among people, therefore the emphasis is on collaboration” (Spedding, 2001, p. 421). It is evident from these definitions that the collaborative and participatory nature of action research is central to the process.

The action research process goes beyond reflecting on teaching practice — it is acting on that reflection. Often teachers make
observations, record their findings, but fail to make changes to their teaching practice (Westwood, 1999). Action research is a planned inquiry resulting in reflection and subsequent change. It is a systematic process in which teaching strategies are recorded and behaviours are adapted as a consequence of research findings (Wadsworth, 1998). This should result in steady and continuous improvements in teaching practice.

It is obvious that action research is a useful approach for many teachers, but its role for learning support teachers is less well documented. In the context of moves towards more inclusive education, the collaborative and participatory characteristics of action research may provide a significant model for collaboration between general classroom teachers and specialist teachers who provide support for students with special educational needs. Moreover, action research reinforces the value of teachers’ own experiences, insights and activities and promotes the development of more inclusive schools by building the capacity of the teaching workforce to respond to student diversity (Thomas & Glenny, 2002).

All Australian State education authorities now provide specialised support services for teachers in regular classrooms, although the models of support vary from state to state (Cowley, 2001). Learning support teachers may find themselves in a variety of roles, which range from working exclusively with teachers in professional development activities through to intensive work with students with special needs, in individualised, small-group, in-class or withdrawal settings (Bailey, 2001). Regardless of the type of educational setting, however, it is a consistent finding that collaborative contexts for teacher support improved academic outcomes, not only for students with special needs, but for all children (Schmidt, Rozendal, & Greenman, 2002).

When collaborative consultation is viewed as a problem-solving process as well as a service delivery model, a range of flexible instructional strategies are likely to emerge to maintain students with special educational needs in the regular classroom (Spedding, 2001). If the problem-solving process is extended to involve planning, systematic intervention, formal recording of outcomes, collaborative reflection and preparedness to change actions in response to the reviewed outcomes, in a cyclical fashion, then the process has become one of action research (Wadsworth, 1998).

This approach contrasts significantly with an alternative view of “collaboration” in which the general and learning support teachers agree to “work together” to manage the class by dividing the class into regular and remedial student groups. The learning support teacher withdraws the students who require special educational strategies into a resource room on a regular basis and essentially provides “relief” for the regular class teacher. This approach is supported by the attitudes of many general class teachers who believe that they lack appropriate specialist training, and that the instruction of
students with special educational needs is best managed by specialists in resource rooms (Shade & Stewart, 2001).

When students receive intensive, individualised instruction through the withdrawal approach, their academic outcomes improve, but as the size of the withdrawal group increases, there has been shown to be little improvement in academic outcomes (Moody, Vaughn, Hughes, & Fischer, 2000). A comparison of students with learning disabilities in inclusive and withdrawal programs found that students associated with the inclusive program earned higher grades, and attended more days of school than comparable students in the withdrawal program (Rea, McLaughlin, & Walther-Thomas, 2002). Placement in special classes was also shown to have insignificant effects on learning outcomes in a meta-analysis of traditional special education interventions (Forness, Kavale, Blum, & Lloyd, 1997). Moreover, the resource room is largely associated with the traditional remedial centre and a negative stigma attaches to that environment (Westwood, 1997). It is also evident that such an approach probably does not provide the regular class teacher with insights to the instructional strategies appropriate for the students with special needs, and it is therefore unlikely that any improvements in student learning will be sustained in the regular class environment.

The implementation of in-class support by the learning support teacher for students with special needs within an action research framework is proposed to have several advantages. The stigma attached to student withdrawal from the classroom is removed (Moss, 1996). The class teacher is less likely to resist change imposed by the “outsider” and collaborative problem-solving results in a higher level of shared responsibility (Jones & Charlton, 1992). The consequences of implementing particular strategies are more likely to be evident, and this may lead to greater flexibility and willingness to change teacher practices in more effective directions (Vaughn, Klingner, & Hughes, 2000).

On the other hand, there are many barriers that arise when attempting to work collaboratively which may negatively affect in-class support. Barriers identified from reviews of research (Spedding, 2001) and studies of teacher practice (e.g., Poon-McBrayer, 2000) include a lack of clarity regarding the roles of team members, lack of available time and over-extension of teachers, the credibility of special educators, conflicting ideas and personal agendas, the age of participants, lack of experience, unwillingness to communicate and inflexibility.

However, the action research approach promotes a collaborative process among teachers that is professionally transparent because of its reliance on agreed strategies and empirical measures of outcomes rather than personal attitudes. With the added advantage of having the potential to improve delivery of in-class support, it offers significant assets to special educators seeking to promote more inclusive approaches in an evidence-based manner. The purpose of this paper is to illustrate the implementation of action research in a single classroom environment as
a method for improving learning outcomes for a student with learning problems and behavioural difficulties. The cyclical nature of action research is demonstrated and the impact on the learning support teacher, class teacher and student outcomes is reported.

**METHOD**

There are a number of different action research models that share common elements. The framework in this study was based on Grundy’s approach (1995), which identifies the elements as reconnaissance, planning, acting, collecting evidence and reflecting. The process is more explicit than the normal daily practices of teaching, and when the collected evidence and reflective processes lead to further planning and revised actions, then the process becomes cyclical and should lead to incremental improvements in teacher strategy and student outcomes.

**Participants**

The study was conducted in a non-government primary school located in a middle-class suburb of Perth, Western Australia. Collaborative consultation between the learning support teacher, the Year 4 class teacher, and the school principal led to the selection of Adam (a pseudonym) for in-class support because of his long history of inappropriate behaviour. At the time of the study, Adam was eight years and ten months old with a history of disruptive and aggressive behaviour that had impacted negatively on his learning. He was an only child and lived at home with his mother, who had recently remarried. His mother was generally supportive of the school approach, but found Adam’s behaviour difficult to manage. In Year 3, Adam had been diagnosed as having “deficits of executive function” by a school psychology service and had been medicated with Dexamphetamine for a short period. Teachers reported that this was associated with considerable improvements in his behaviour. However, his mother had decided to discontinue the medication and Adam’s behaviour in the Year 4 class was very disruptive and aggressive.

The learning support teacher (second author) was undertaking a Master’s degree in Special Education and approached the school principal for permission to undertake a major case study within the school that would be documented and accredited as part of her postgraduate study requirements. This teacher had four years’ experience in secondary education and then had made the transition to primary education following a retraining program undertaken at a College of Education. Her subsequent master’s level studies included units in Special Education and in this context the request was made. The learning support teacher was already an employee of the school on a part-time basis and had been team-teaching the class that contained Adam and a number of other students with learning and behavioural difficulties. Following agreement from the class teacher and the school principal, the learning support teacher consulted with her university staff mentor (first author) and nominated an action research approach to address Adam’s learning and behavioural difficulties.

The Year 4 class teacher had been appointed to the school at the beginning of the school year and she was experienced in general
primary classroom instruction. She agreed to participate in the project because she had already established a working relationship with the learning support teacher and because she acknowledged that the class was challenging due to the presence of a range of students with learning and behavioural problems.

**Setting**

The first decision, to locate the intervention program within the regular classroom, arose from discussion between the class teacher and learning support teacher regarding the most appropriate situation for action. Initially, the learning support teacher was hesitant about an in-class location, due to the high level of disruptive and noisy behaviour exhibited by others in the class. However, she agreed to undertake this option because an action learning approach enabled ongoing evaluation of the progress of the study. Thus, if the classroom learning environment proved to interfere with good progress, this should be reflected in outcomes and could be discussed subsequently with the class teacher. A table was set up at the back of the classroom for one 60-minute lesson, one day per week for five weeks.

**Cycle 1**

The first stage, *reconnaissance*, involved seeking information about Adam in the classroom context, and seeking information relevant to his needs from the literature. Information on Adam’s learning and behaviour was gathered from a number of sources, including his school file, talking to previous teachers, samples of his work, talking to the class teacher, class observations and recordings of his classroom behaviour. An analysis of Adam’s previous school reports, samples of his writing, reading observations and Adam’s profiles on the Reading Developmental Continuum (Education Department of WA, 1997) and Writing Developmental Continuum (Raison, 1997) indicated that he had difficulty with many tasks. These included:

- integrating and organising complex information;
- understanding a given task;
- staying on-task and completing given tasks;
- getting motivated;
- decoding new words;
- understanding what he reads;
- writing stories and sequencing his ideas;
- using correct punctuation;
- spelling words;
- expanding his vocabulary.

Teacher observations of Adam’s behaviour indicated that he was off-task, talked out constantly, was out of his seat and touched his neighbour frequently. An analysis of reports by previous teachers and observations of his behaviour in class resulted in the following behaviour profile:

- Adam’s behaviour is unpredictable.
- He regularly hurts other children.
- He verbally abuses both peers and teachers.
- He intimidates other children, causing anxiety and tension among his peers.
- He is defiant, often refusing to carry out instructions.
• He interrupts the teacher during direct instruction.
• He refuses to stop an inappropriate behaviour when directed.
• He regularly demands the attention of his peers.
• He touches others and frequently places his hands around their necks.

Both teachers were very concerned about Adam’s poor literacy, particularly his poor writing output, and the significant impact of his disruptive behaviour on his learning and on the good conduct of the class. It was therefore decided to select one learning goal and one behavioural goal as the targets for the first cycle of the intervention. These decisions guided a selective review of relevant literature to assist in the next stage of planning.

Planning for writing is an extremely important strategy to improve the output of poor writers (Hess & Wheldall, 1999). It provides the student with a structure, which allows the writer to obtain an overview of the writing task from the start, resulting in logical sequencing and integration of ideas. Spelling, punctuation and syntax must also be learned as part of the writing process, and self-correction should be encouraged for the student to move towards independence in his/her writing (Jones & Charlton, 1992). Useful tools for teachers to introduce are advance organisers, such as pictures, outlines and paragraph clusters, that show the correct sequence of events, since most students with learning difficulties struggle to develop their own story line (Harwell, 1995).

A writing intervention plan should include key writing strategies, development of knowledge and understanding of the writing process, strategies for developing a positive attitude, and strategies for planning, organising and revising writing (Raison, 1994).

Planning to reduce disruptive behaviour was guided by consideration of a range of behavioural intervention strategies described in the literature, including response cost, time-out, the token economy, peer tutoring, school-home notes, self-regulation techniques and self-management techniques (e.g., Reid, 2001). Most research reports incorporate taking baseline measurements to establish the frequency of a particular misbehaviour and its severity, in order to monitor the student’s progress within a given time frame (Rosenberg, Wilson, Maheady, & Sindelar, 1997). The positive behaviour that is to replace the negative behaviour must be stated. The behaviour targeted must not be too general and, in order to ensure success, it is preferable to target one specific intervention (Reid, 2001).

Students must be aware of the rules, know what they mean, how to act in acceptable ways, the consequences of breaking them and how to respond immediately (Harwell, 1995). Being brief when praising or reprimanding is essential, and immediate reinforcement for correct behaviour must occur (Mastropieri & Scruggs, 2000). Rewards should be evaluated every two or three weeks to determine their effectiveness and may be changed if necessary, while punishment, such as response cost, is introduced for failing to fulfil contractual demands (Reid, 2001).
The culmination of the second stage, planning, involved the development of an individualised education plan (IEP) with the goal of improving Adam’s written output, and the development of a behavioural management strategy that was designed to reduce the frequency of disruptive behaviour. An IEP was drawn up based on an analysis of the Adam’s needs and four short-term writing goals (Appendix A) were established. The aims were for Adam to develop a step-by-step planning approach to all writing tasks, use a framework for a writing task, use given cues and prompts to aid his writing, and edit his own work using an editing card. This was to be implemented in a small writing group of four pupils.

Table 1. Assessment Tasks and Assessment Criteria

<table>
<thead>
<tr>
<th>Writing Assessment Tasks</th>
<th>Writing Assessment Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequencing of sentences</td>
<td>Place events in a logical order</td>
</tr>
<tr>
<td>Prepared paragraph</td>
<td>Identify the main idea of the paragraph</td>
</tr>
<tr>
<td>Cluster procedure</td>
<td>Use cluster to link ideas to a topic sentence</td>
</tr>
<tr>
<td>Editing of prepared paragraph</td>
<td>Edit a given paragraph using editing cards</td>
</tr>
<tr>
<td>Individual conferencing</td>
<td>Discusses progress and problems</td>
</tr>
</tbody>
</table>

A set of assessment tasks and assessment criteria was also developed during the planning stage to enable the collecting of evidence which would inform the acting and reflecting components of the action research cycle. With respect to writing, the tasks and criteria were linked closely to the goals, as evident in Table 1. A spelling analysis and an analysis of Adam’s editing skills were completed at the end of each writing session, the results recorded and the outcomes used to help determine the focus for the next lesson.

The aim of the first behavioural goal was to set up a contingency system that would encourage Adam to refrain from interrupting lessons while seated with the other children on the mat at the front of the room. The regular class teacher identified this goal as one that had a high priority because “Mat-time” was an important aspect of whole-class activities and Adam’s disruptive behaviour had spoiled many important opportunities for class interaction and discussion. The initial strategies involved explicit teaching and modelling of expected mat behaviour, to be carried out on Wednesdays while the learning support teacher was taking the whole class for the day.

An instrument to assess Adam’s behaviour on the mat with the class was devised, based on frequency per hour. Every Wednesday over a period of seven weeks, Adam’s behaviour was recorded. The behaviours selected for assessment were “not listening”, “talking out”, “inappropriate behaviour”, “hurting others” and “out of seat without permission”. Adam’s behaviour was noted on a recording sheet over a period of an hour. Disruptive behaviour was coded each time a behaviour occurred throughout the hour. A record of his behaviour during the four writing lessons was also implemented to measure the extent of appropriate behaviour in this second setting.
The two aspects of stage three, *acting on the writing plan* and *acting on the behaviour plan*, were implemented by the learning support teacher within the regular classroom. The writing plan was implemented at a small table at the rear of the classroom with four boys, including Adam, who would all benefit from guided instruction to improve their writing outcomes. Keeping Adam on task was identified as a key strategy to improve his work in the writing group, and this was achieved by breaking down the writing task into smaller steps. Each step completed was reinforced with rewards that were frequently changed to maintain interest. The tasks were designed to suit Adam’s ability and guided practice preceded individual practice. Pictures were used to encourage the development of a story line. Productive routines were established to encourage feelings of security and control for the students over their learning environment.

The learning support teacher acted on the behaviour plan for Adam in the context of managing the whole class on Wednesdays. She was obliged, by school policy and also as a professional courtesy, to implement the regular class teacher’s general management strategies when teaching the whole class to maintain continuity. These strategies included a token economy system, time-out (after three warnings Adam was sent out of class) and a task card (each completed task had to be acknowledged in exchange for 10 minutes’ free time).

In the fourth stage, *collecting evidence*, teacher analysis of Adam’s writing showed that his ability to sequence ideas and to write story paragraphs began to improve after four one-hour lessons at weekly intervals. Adam gained confidence in his editing skills, and was able to identify most of his spelling errors, capital letters at the beginning of sentences and missing full stops. He still demonstrated incorrect placement of capital letters in the middle of words or sentences. It also became evident that his story writing ability was limited by his restricted range of vocabulary and spelling ability. More seriously, Adam’s behaviour in the small group continued to be disruptive, with two of the four lessons marked by persistent inattention, frequent interruptions, shouting and swearing (see Figure 1).

These teacher observations of Adam’s behaviour, recorded during and after each hour of the in-class remedial session, were confirmed by the evidence from the frequency records of disruptive behaviour elsewhere in the classroom. Adam’s recorded behaviour over a period of an hour each Wednesday for seven consecutive weeks revealed a persistent pattern with no evidence of improvement. The most frequent and persistent behaviours were his inability to listen when reprimanded, inappropriate behaviours (e.g., putting his hand around a peer’s neck, swearing), talking out and hurting others. In fact, on three of the days, Adam was removed from the class for the remainder of the day for hurting a peer (see Figure 2).

Further problems developed as the impact of the selected classroom management strategies started to emerge. The token economy operating
in the regular classroom had a net negative effect on Adam, as he was constantly being fined for inappropriate and off-task behaviour. As a result, the class teacher stopped using this system. The time-out strategy resulted in Adam spending too much time outside the classroom. The task card also emphasised Adam’s poor performance. The combined effects of these approaches were overwhelmingly negative, since Adam’s dysfunctional behaviour either excluded him from the rewards or drew attention to his misconduct.

The class teacher then tried to solve the problem by adopting a range of management strategies that varied from week to week. This created a classroom environment that was unpredictable from the students’ perspective, and some other students began to mimic Adam’s behaviours. The action research process, which had drawn explicit attention to the systematic implementation of behaviour management strategies, and the collected evidence of Adam’s continuing disruptive behaviour over five weeks, eventually led both teachers to the undeniable conclusion that the program to improve Adam’s outcomes was not effective. The most encouraging feature of this conclusion was that it arose from the shared engagement and reflection on the action research process. This was a refreshing alternative to options, such as blaming the student (“he’s uncontrollable”), blaming the other teacher (“she’s incompetent”), or blaming an external factor (“the home situation is very difficult”). Unfortunately, matters then took a dramatic turn for the worse, and Cycle 1 came to an abrupt end.

Turning point: Adam lost his temper after a particular incident and threw two chairs against the classroom wall in frustration and anger. The students were not in the class at
the time and the class teacher was absent for three days; the learning support teacher was providing relief teaching for the whole class. This act clearly illustrated that the safety of the students in the class was at risk. The learning support teacher was very distressed by this incident and discussed the program and her wider duties of care in consultation first with the school principal and then with her university mentor. The severity of the incident prompted the principal to involve the whole school staff and to seek additional external support in managing Adam’s behaviour and protecting the other children in the class.

A meeting of all stakeholders was set up and, for the first time, the principal became aware of the full extent of learning and behavioural difficulties in this particular classroom. A non-government school consultant was called in to help the class teacher identify the needs of all the students with learning and behavioural difficulties in her classroom. Adam was placed on a behaviour program for the second term that was administered in partnership with a neighbourhood community-based child development clinic. It was agreed that if Adam’s behaviour did not improve after three warnings, the school would contact a clinic health officer who would come and remove him from the school grounds. Adam would be given positive behavioural training at the clinic for the remainder of the day and would then return to school the following day. The learning support teacher and the class teacher agreed to reflect on their experience and to plan a second action research cycle with a higher probability of success.

Figure 2. Frequency of Adam’s disruptive behaviour in class

D = Every Wednesday over seven weeks
Cycle 2
The learning support teacher reflected on the outcomes of the first cycle with her mentor and acknowledged that the story-writing goals of the initial IEP had been too ambitious in view of Adam’s learning difficulties; and that Adam was experiencing little success and receiving very few of the rewards available to the participants of the small writing group. This led to insight, on the part of both the class teacher and the learning support teacher, that Cycle 2 of the action research process should focus on introducing high rates of reinforcement for improved behaviour, and that improving Adam’s spelling was an aspect of story writing that could be manipulated to achieve a higher probability of success. In addition, it was realised that the frequency of in-class supported intervention needed to be increased from one day to three days per week (five days were not possible, but three days were better than one). The school principal supported the adjusted IEP goals and the increased intensity of the program. The teachers embarked on the reconnaissance stage of Cycle 2, to identify strategies to improve Adam’s spelling and to assist him to develop more positive behaviour.

The reiteration of the reconnaissance stage focused on spelling research, which emphasises that one way for students to improve their spelling is to correct their completed writing immediately (Baker, Gersten, & Graham, 2003). However, students like Adam who have a limited vocabulary tend to use only the words they can spell correctly. This is an adaptive strategy in the short term, since it ensures that the student at the very least avoids teacher criticism, and may even receive praise for error-free writing, but it restricts the scope of writing in the longer term. One solution is to introduce a systematic method for expanding written vocabulary and the 500 Most Commonly Used words was identified as an appropriate resource (Harwell, 1995). The 500 Most Commonly Used Words list has been designed to enable students with learning difficulties to reach a minimum literacy level.

The selective review of the remedial spelling literature also revealed the importance of error analysis. Before devising an appropriate spelling intervention plan, samples of the student’s writing must be analysed in order to determine the nature of errors (Traill & Symes, 1995). This gives insight to the spelling development that has been achieved, since phonetic spelling errors (e.g., “skool”) reflect more advanced awareness of spelling structure than random arrangements of letters (e.g., “scloh”) or spelling without vowels (e.g., “skl”) (Prior, 1996).

Spelling intervention strategies recommended in the literature (Westwood, 1999) that were included in the second phase of the case study were:

- developing a word box with index cards which the student files alphabetically once they can spell the word;
- closure exercises that require the student to fill in the blanks in a sentence using words from the word box;
• Look-Cover-Write and Check study strategy;
• dictation that includes words currently being learnt and playing spelling games;
• writing the new words on flash cards and asking the student to think of ways they can remember the word using memory keys;
• explicit teaching of the spelling rules;
• severing the word into fragments (syllabification).

Particular attention must be given to the details of letters and phonemes, to spelling rules and to checking written words. “Simultaneous Oral Spelling” is a combined approach that uses auditory, visual and kinaesthetic strategies to improve spelling (Prior, 1996). To implement an appropriate spelling program, a dual approach was used that focused on auditory and visual strategies to teach the 500 Most Commonly Used Words (Harwell, 1995).

One successful approach to achieve long-term positive behaviour is the strategy identified as Positive Behavioural Interventions and Supports (PBIS) (e.g., Sugai & Horner, 2001). However, unlike the US, where the federal Individuals with Disabilities Education Act (IDEA) mandates the implementation of such approaches for students with a history of challenging behaviour, Australian schools lack the imperative to introduce school-wide preventative approaches. The dearth of professional development programs for Australian educators to develop the skills associated with the implementation of PBIS has been noted (Arthur, Bruveris, Smith, & Stephenson-Roberts, 2002). The learning support teacher and class teacher recognised that they needed to plan a more positive learning environment for Adam, and decided to focus on teaching the social skill of cooperation with a peer, during the story writing/spelling small group lessons. They chose to work with the six-step intervention program recommended by Westwood (1997): describing the skill to be taught, modelling the skill, student imitation of the skill, teacher feedback, provision made for practising the skill and continuous fading to intermittent reinforcement.

The planning stage of Cycle 2 led to the development of a second IEP, in which three short-term spelling goals and one behavioural goal were outlined, targets were established and resources for implementation and reinforcement were marshalled (Appendix B). A set of assessment tasks and assessment criteria were developed to meet the spelling goals (see Table 2).

To assess the effectiveness of the intervention to improve cooperation, Adam’s behaviour was observed while participating in spelling games with a peer. Consistent with the partnership with the community-based child development clinic staff, it was agreed that Adam would continue to be removed from the school for the rest of the day after receiving three warnings for inappropriate behaviour.
Table 2. Spelling Assessment Tasks and Assessment Criteria

<table>
<thead>
<tr>
<th>Assessment Tasks</th>
<th>Assessment Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dictated sentences</td>
<td>Edit dictated sentences using editing card</td>
</tr>
<tr>
<td>Read flash cards</td>
<td>Read and discuss the patterns in words</td>
</tr>
<tr>
<td>Closure activities</td>
<td>Use word box to complete the sentences</td>
</tr>
<tr>
<td>Bingo game</td>
<td>Read and identify the words called out</td>
</tr>
<tr>
<td>Spelling tests</td>
<td>Spell the words given the day before</td>
</tr>
<tr>
<td>Individual conference</td>
<td>Discuss progress and problems</td>
</tr>
<tr>
<td>Index card filing</td>
<td>File words in alphabetical order</td>
</tr>
<tr>
<td>Word endings sheet</td>
<td>Fill in the word ending read out</td>
</tr>
<tr>
<td>Run Cat Run spelling game</td>
<td>Fill in the short sounding vowel</td>
</tr>
<tr>
<td>Ladder Tree spelling games</td>
<td>Fill in the missing vowel to make a word</td>
</tr>
<tr>
<td>Pork's Problem spelling game</td>
<td>Cover Pork's spots using a word from the same &quot;family&quot;</td>
</tr>
</tbody>
</table>

The two aspects of stage three, acting on the spelling plan and acting on the social skill plan, were again implemented by the learning support teacher as an in-class strategy for a small group of students. The small group lessons took place at the back of the classroom on three days per week, for 45 minutes per lesson. The implemented action involved a number of steps:

- Application of teaching strategies for the spelling group.
- Application of spelling and social skills measuring instruments.
- Application of assessment tasks and criteria.

The teaching strategies consisted of a number of small, manageable tasks appropriate to each student’s level of spelling development, predetermined by error analysis of each student’s spelling. Time-on-task was maximised and verbal instructions were kept to a minimum. Index boxes and spelling games were used to make learning more authentic and enjoyable. The number of tasks increased together with the reinforcement schedule. Rewards were given for completion of each step and the rewards were reviewed and changed frequently. The interactive teaching approach was applied when introducing new words on flash cards to enable each student to determine personalised ways of remembering sight words.

The cooperative learning approach was used during spelling games to increase the opportunities for positive student interaction. Social skills required for each game were explicitly taught, modelled and imitated. Each student’s progress was monitored and changes were made to the program accordingly. In this way, the social goal of cooperation was modelled and reinforced for Adam without drawing excessive attention to his particular problems.

The spelling intervention records established to collect evidence indicated that Adam attended
seven of the nine spelling lessons that were interwoven with story writing activities. By the conclusion of the lessons, Adam was demonstrating the effective writing of a story with a beginning, middle and ending. Adam’s spelling was analysed according to the following categories of errors: reasonable phonetic alternative, auditory confusion, omissions of one or more letters, transpositions where the letters are correct but in the incorrect order, incorrect doubling of a letter and words incorrectly spelt that are unclassifiable. Figure 3 indicates Adam’s spelling progress in his writing.

The number of auditory, phonic and omissions spelling errors decreased considerably. The number of words in his story increased from 27 in the first to 91 at the conclusion of spelling lessons, evidence that his success in spelling contributed to a growing confidence in story writing. Adam’s editing of his final paragraph indicated that he did not automatically use the correct punctuation, but consistently identified his errors when editing his work.

Evidence of the development of cooperative behaviour was inferred from measuring changes in inappropriate behaviours during the eight minute game played with a peer: poor manners, not listening, not given compliments and not being a good sport. The frequency of disruptive behaviour was coded during the eight minute spelling game. Adam’s social skills outcomes are recorded in Figure 4.
Adam’s behaviour was appropriate in the third, fifth, sixth and seventh weeks of playing spelling games, indicating that the game strategy led to a reduction in challenging behaviour and that he was able to complete a spelling game with a classmate, which was quite an achievement.

To meet university requirements for submission of major projects, the learning support teacher ended the formal case study after seven weeks of the second cycle. By this time, Adam’s spelling and story writing had improved and his social behaviour within the small group had improved. His behaviour in the wider school context was variable, and the involvement of the community-based clinic continued until the end of term.

The learning support teacher reflected with her university mentor that the action learning approach had caused her to be much more systematic in her data collection and analysis of student progress than would be her normal pattern. She had become convinced that in-class support was essential because it enhanced the working relationship between the learning support and class teachers, and encouraged the class teacher to observe the intervention processes. The class teacher reflected on her changed attitudes towards intervention programs for Adam, whom she had previously judged to be a very difficult child who was unlikely to respond to her strategies. The two teachers concluded that observational learning was more compelling as
a form of professional development for both teachers than attendance at staff meetings or off-campus professional activities.

CONCLUSION
This study confirms findings from previous research showing that action research contributes to local educational knowledge (Bednarz, 2001; Mills, 2000; Ross et al., 1999). The documented failure of Cycle 1 was evident to both teachers even before the dramatic incident that led to the intervention of the school principal and the child development clinic staff. The success of Cycle 2 within the classroom was reinforcing not only for the student but for the teachers concerned. They were both “shamed” by the incident in which Adam had exhibited such aggressive behaviour, and the action research strategy provided a framework within which they could plan a new strategy and observe its outcomes objectively. Ultimately, this two-phase cycle led to greater improvement in behavioural and academic outcomes for a student with learning and behavioural difficulties, and benefited the learning support and class teachers in their management and professional development. In-class learning support provided opportunities to understand the context in which the student with learning difficulties operated, and gave the class teacher time to observe the program first hand and to assess the value of that approach. This provided opportunities for the class teacher to make suggestions to enhance the student’s learning and encouraged the class teacher and learning support teacher to work together. Given that some staff members at Adam’s school believed that he should have been excluded from the school, collaborative support was essential for those committed to managing his problems within the regular classroom. In-class learning support differs from co-teaching in that the learning support teacher maintains responsibility for instructional delivery, monitoring, and assessment of a small group of students in a designated area within the classroom. In this way, the expertise of both types of teacher is optimised and each learns from the other.

The learning support teacher reflected that working collaboratively with the university mentor also provided valuable support of a different kind. It helped her to define and articulate situations as they arose, and assisted in the development of strategies, provided alternative ways of interpreting situations and evidence, and encouraged deeper analysis of perceptions and motivations.

The university mentor found the experience of participating in the weekly meetings with the learning support teacher to be both rewarding and frustrating. It was rewarding to observe the teacher insights gained as Adam’s behaviour first deteriorated and then began to improve in response to the adjusted program of Cycle 2. It was frustrating to be aware of some of the inappropriate decisions taken by the teachers, particularly with respect to their neglect of the positive behavioural support approach. For example, the design and measurement of the behavioural management interventions were overwhelmingly based on negative behaviours, and it would have been much
more appropriate to record Adam’s positive behaviours. This would also have been more consistent with strategies of positive behaviour support, but both teachers were insistent that the school required evidence that their actions were leading to a decline in the negative behaviours that were so problematic for Adam’s classmates and other teachers. The mentor’s decision not to intervene was based on her commitment to allow the action research cycles to be the source of teacher learning, and it was evident that the teachers had modified their attitudes and behaviours by the end of Cycle 2.

The decision not to intervene also raised ethical questions for the mentor. Was it appropriate not to intervene, when the indicators were that the interventions of the first cycle were too negative, too infrequent and very unlikely to succeed? Several factors guided the mentor’s decision to stay committed to the action research pathway. One factor was that the school at all times held the duty of care for Adam and his classmates, and to have acted as if they were neglectful of this responsibility would have been presumptuous. The swift intervention of the principal when Adam’s behaviour threatened to harm others demonstrated that indeed the duty of care was not taken lightly. The second factor that the mentor took into account was that direct intervention from an outsider would have contravened a fundamental premise of the action research process, which is that the experience of the participants is valued to guide the process, and is a crucial element in achieving longer-term change. To have intervened would have disempowered the teachers, and undermined their confidence in developing procedures that would assist Adam (and potentially other students) beyond the short lifetime of this project. It would also have delayed the intervention of the principal and the development of a school-wide approach, which was a very positive outcome.

The challenges of relinquishing control as a university-based teacher/researcher have been articulated elsewhere, in the context of establishing participatory approaches to teacher development in “communities of practice” (Perry, Walton, & Calder, 1999). However, these challenges are to be contrasted with the far greater problem of the research to practice gap in special education. Greenwood and Abbott (2001) have suggested that the application of research findings to classroom practice is particularly slow because of the perceived limited relevance of educational research to practice, and the perceived failure of research to produce many innovations that are usable in real classrooms. If one proposed solution is to bring researchers and practitioners into closer working relationships, then the balance of power must be equitable and the partnerships must be genuinely collaborative.

Finally, it should be noted that the action research outlined in this report is very modest in scope. It did not seek to involve other members of the school community, and the parent, who was exhausted by her son’s behaviour, welcomed the intervention but declined to participate.
during school hours. However, the modest improvements in Adam’s behaviour after such a long history of problems were noted by other staff and made a significant difference to the climate of his Year 4 classroom. The action research project provided a clear process, objective evidence and professional support to enable two teachers to improve their management skills in tandem. Most importantly, the regular class teacher took a cautious step towards accepting, rather than excluding, the management of a child with substantial learning and behavioural difficulties, and this represents an important forward movement in building more inclusive classrooms in partnership with special educators.

REFERENCES


### Appendix A: IEP Cycle 1

<table>
<thead>
<tr>
<th>Goal</th>
<th>Start Point (April 5th)</th>
<th>Target</th>
<th>Personnel/ Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequencing of sentences</td>
<td>Has problems linking sequencing ideas</td>
<td>Sequence 6 sentences with 80% accuracy over 5 lessons</td>
<td>Teacher modelling Sequencing cards Reward stickers</td>
</tr>
<tr>
<td>Identify the main idea in a paragraph</td>
<td>Has no idea about what constitutes a paragraph</td>
<td>Identify the main idea in 3 out of 4 paragraphs</td>
<td>Teacher modelling Paragraphs Reward Stickers</td>
</tr>
<tr>
<td>Will write paragraphs using topic sentences</td>
<td>Finds writing difficult and does not sequence his ideas</td>
<td>Plan paragraphs using topic sentences, pictures and clusters over 5 lessons</td>
<td>Guided practice Picture cards Cluster sheet Reward Stickers</td>
</tr>
<tr>
<td>Will edit all his written work</td>
<td>Inconsistently begins sentences with capitals and writes capitals in words and sentences</td>
<td>Edit teacher’s writing. Edit work using a checklist. Correct 80% of incorrectly written capitals</td>
<td>Teacher modelling Editing checklist Teacher samples Reward stickers</td>
</tr>
</tbody>
</table>
Appendix B: IEP Cycle 2

<table>
<thead>
<tr>
<th>Goal</th>
<th>Start Point</th>
<th>Target</th>
<th>Personnel/Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve sight vocabulary and spell commonly used words</td>
<td>Cannot spell the most commonly used words</td>
<td>Over 9 lessons learn 109 words from <em>500 most commonly Used Words</em> getting 18 of 20 correct</td>
<td>Guided help</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Index cards</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Closure activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bingo cards</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stickers</td>
</tr>
<tr>
<td>Write down a sentence heard orally</td>
<td>Difficulty writing oral sentences</td>
<td>Write 3 dictated sentences accurately</td>
<td>Instruction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dictation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stickers</td>
</tr>
<tr>
<td>Identify spelling patterns in words</td>
<td>Does not attempt to spell sight words or identify patterns or blends in words</td>
<td>Identify irregular spelling words. Use memory keys to spell them</td>
<td>Guided practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hi-lighters</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stickers</td>
</tr>
<tr>
<td>Work cooperatively with a peer</td>
<td>Cannot work responsibly with others</td>
<td>Work cooperatively with a peer for 8 minutes</td>
<td>Teacher modelling</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Spelling games</td>
</tr>
</tbody>
</table>
ISBN: 0 86433 1967

All of the chapters in this new edition of *Child language development: Learning to talk* have been revised. The main area of the text that has been extended upon is the important place of communicative intentions in very early language development.

This book gives a thorough explanation of the early stages of language development and draws the readers’ attention to the importance of early language experiences in the process of learning to communicate; that is, providing opportunities for children to observe and listen and also facilitating meaningful interaction with others, objects and events. It links language acquisition with the need to communicate to express feelings, convey ideas and interact socially. Very early on in the book there is an emphasis on individual differences in children so the text does not become an age and time line of skill acquisition. The authors frequently refer to recent and past research in the area and also draw from theorists’ contributions and views on language development. This gives the reader ample background on the nature of communication and the acquisition of early language skills.

The book is broken into three parts. Part One, Chapters 1–4, gives an overview of communication as a concept and goes into the developmental sequence of acquiring language. It is great to see that this chapter explores the skills underpinning language development, for example, joint attention and turntaking. It was valuable to read the sections on “How” and “Where” children acquire language, with a real emphasis placed on the importance of routine, home, play and naturally occurring situations and interactions. It was now (as an Early Intervention Teacher) that I was wondering about those children with special needs and children who find it difficult to play. It was within this section that the authors explored the idea of scaffolding and supporting children’s play.

Towards the end of Part One it was emphasised that parents, families and others play an important role in the process of learning language. I do feel that the importance of family could be explored further. The notion of fathers as secondary carers was introduced, which, in my opinion, could offend some very active fathers. On the other hand, it does allow an opportunity to recognise different parental responses, and offers some valuable suggestions in regards to being aware of responsiveness when interacting with children.
Part Two (Chapters 5–9) of the book expands on the language intervention program. It emphasises how important it is to watch and listen to discover how the child is communicating at the present moment. These observations and language samples in collaboration with the family then go toward developing an individual program that outlines developmentally appropriate goals, objectives and activities. I found that this section was not only designed for professionals, but it was also very oriented towards family participation. It gave some valuable suggestions of activities at various developmental levels.

Bochner and Jones then move into a very interesting area of communication, an area that is often overlooked in language development. Chapter 10 explores communicative intentions in a very systematic and thorough manner. It relays to the reader the purpose behind communication, that is, early pragmatic behaviours to gain attention, request, control another’s action or to interact socially. This section goes on to emphasise that the social aspect of language is vital in the child being able to communicate effectively in various contexts, and again offers some practical suggestions observing, assessing and encouraging communicative intentions.

Part Three of *Child language development: Learning to talk* revisits more general issues in language acquisition and practical issues that arise when providing children with learning experiences, especially those children with communication delays and difficulties. During this chapter, Speech Pathologist Christine Hardman gives valuable input into the development of phonology and sounds in a very clear and straightforward manner. She explains the importance of those initial yet vital infant sounds and moves through to attempts at real words. She gives valuable examples of sounds and how they could be integrated into daily activities and interactions. It is recognised that the path to learning to talk for some children is long and often difficult. Chapter 12 is dedicated to the use of Augmentative and Alternative Communication Systems (AAC), and provides many explanations as to the introduction of non-verbal systems of communication. This chapter outlines a variety of AAC systems available and considers, Who could benefit? When should it be introduced? Which AAC to use? This chapter briefly touches on combining systems and total communication. I do feel that this could have been further explored by discussing the benefits of using a total communication approach when interacting with children.

The last three chapters of the book discuss working with children whose home language is other than English, working with children not only on an individual basis but also as part of a group, and working with families. This section emphasises the importance of children watching and learning from their peers during play, a critical point for all people involved in child language development. The authors explore the need to work with the family and viewing the family as central to the process, reviewed in appendix F.
The book is thoroughly referenced and research is well cited throughout the text. The appendix gives a useful range of samples, assessment sheets and observation record forms.

The 2003 edition of *Child language development: Learning to talk* by Bochner and Jones builds on and complements the first edition. It is easy to read and provides practitioners, educators, students and families with sound and researched theory and, just as importantly, practical elements for enhancing children’s language and communication development.

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Overall, this book covers general aspects of special education needs in the regular classroom and broad instructional implications for literacy and numeracy, with a focus on Australian (in some cases Queensland only), American and British research.

The first chapter is concerned with the identification of learning difficulties, in line with Westwood’s notion, in that learning difficulties are related to students at risk of failure unless effective interventions and support are provided. Foundations for this definition are based upon Queensland and American studies, and the chapter contrasts the diagnostic, prescriptive medical model with issues of student functionality and curriculum bases for intervention.

A series of five chapters follow that focus on different aspects of reading. The second chapter uses support from the recent report by the National Reading Panel to confirm the importance of using empirically based reading instruction, with a somewhat critical tone adopted in relation to past and current classroom instructional practices in Australia. Chapter 3, based partially in information processing models, examines reading fluency as this impacts on working memory capacity and difficulties in reading comprehension. The author discusses the strength of using specific skill instruction within the context of an eclectic reading program. The use of “stage”-based terminology may be somewhat confusing in relation to New South Wales Syllabus terminology for some readers. The fourth chapter confirms the selective efficacy of Reading Recovery and the importance of phonological awareness as measured by the Sutherland Phonemic Awareness Test (SPAT), which has been normed in New South Wales. Supplementation of Reading Recovery methods, using additional instruction focusing on the alphabetic principle, supported by recent research, is recommended. Chapters 5 and 6 relate to reading comprehension difficulties. Chapter 5 focusses on the importance of both strategy instruction and communication between class teachers and specialist teachers working with the same students. Chapter 6 is concerned with using imagery and visualisation strategy instruction to enhance reading comprehension. Neither of these chapters includes empirical data to support information presented.

A change of theme in Chapter 7 provides a general overview of research into second language instruction and students with learning difficulties. This chapter notes that one of the best predictors of success with second language acquisition is success with first language
acquisition. The use of explicit teaching is recommended over naturalistic teaching provisions. Chapter 8 reports some action research in a secondary context that focuses on teacher perceptions of student learning, rather than empirical data of student outcomes.

Three chapters focus on numeracy issues relevant for students with learning difficulties. Chapter 9 focuses on error patterns in mathematics, Chapter 10 on the role of classroom teachers to address math problems, using Westwood’s model of learning difficulties, and Chapter 11 examines the cognitive processes that students use during division problems. These chapters provide some specific examples of errors made by students, and interventions are broadly discussed. Chapter 12 changes theme to highlight the importance of social skills, and provides an outline of 10 strategies that might be used for facilitating social interactions for students with learning difficulties, again at the general level.

One possible weakness in this general approach to interventions for students with learning difficulties is that general interventions ignore the critical role that teaching examples play in the effectiveness of any intervention program. So while some teachers may find this book useful, others may implement some of the suggested strategies and find that these are less effective due to the specific teaching examples that they use with their students.

The final chapter, by Peter Westwood, uses analogies to his personal experiences in learning to speak Cantonese since his move to Hong Kong. This particularly highlights two of the critical issues around learning difficulties. Firstly, and most importantly, he emphasises that the environment affects the level of learning difficulties that students experience. Secondly, he implies that experiencing difficulties in learning is something that many teachers find difficult to understand and “get their head around”.

If you have any doubts about this second issue, my advice is to take up a new skill or hobby that you have never participated in before. You will probably find yourself feeling less than successful in a very short time – I know I did when I took up swing dancing. During my initial classes, I was the student who felt like such a fool when I asked for additional demonstrations and extra time to learn particular steps. Funny thing was that, after those initial classes, several other students approached me and thanked me for asking. Apparently they were having the same problems – difficulties in learning those steps – and yet were much too afraid to ask!
I would recommend this book as a general reference for learning difficulties, as it outlines the sorts of errors that students make and provides some general guidance to the broad features of effective instruction that is in line with current research and literature.

Gail Brown
AASE NSW Chapter Committee
The 29th National Conference of the
Australian Association of Special Education
23-25 September 2005, Brisbane, Queensland

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