Educational Planning for Special Needs Students

Attention-Deficit Hyperactivity Disorder
&
Visual Impairment

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1.0 Introduction

Inclusive education policy both in Queensland and Australia wide, dictate that students with special needs should be included within the regular classroom wherever possible. With this in mind, it is essential for teachers to become more aware of the possible disabilities which students could present with, to identify best practice in instructional and behaviour management strategies, and to incorporate these into their teaching. Many of these strategies are transferable as good pedagogy for all teaching scenarios. ***[With this in mind, I have departed from the requisite structure of the paper, to address task 1, point 3, within the body of task 2.]***

TASK 1

2.0 Attention-Deficit Hyperactivity Disorder

The closest we can get to a formal definition of ADHD can be found in the Child and Adolescent Component of the National Survey of Mental Health and Well-Being (Sawyer et al 2000, p.19). Here ADHD is defined as:

> [A]persistent pattern of inattentive behaviour and/or hyperactivity-impulsivity that is more frequent and severe than is typically observed in individuals of the same developmental level. Children and adolescents with inattentive behaviour problems make careless mistakes with school work, find it hard to persist with tasks and are easily distracted. Those with problems in the area of hyperactivity/impulsivity often fidget and talk excessively, interrupt others, and are constantly 'on the go'. There are three subtypes of ADHD based on the predominant symptom pattern for the past 6 months. Children and adolescents with symptoms of both inattentiveness and hyperactivity-impulsivity are diagnosed with ADHD, Combined Type; those with primarily inattentive symptoms are diagnosed with ADHD, Predominantly Inattentive Type; and those with primarily hyperactivity-impulsivity symptoms are diagnosed with ADHD, Predominantly Hyperactive-Impulsivity Type.

2.1 Prevalence

The following table summarises the prevalence of ADHD in Australia based on a study by Gomez et al (1999, cited in Romano et al 2002).

Study	Sample	Informant	ADHD Sub Type		Prevalence Ages 5 - 11
Australia (Gomez et al., 1999)	1,275	Parent ratings	Inattentive	Girls	1.9
				Boys	6.8
			Hyperactive-Impulsive	Girls	1.9
				Boys	3.6
			Combined	Girls	1.8
				Boys	4.1
		Teacher ratings	Inattentive	Girls	3.0
				Boys	8.9
			Hyperactive-Impulsive	Girls	0.3
				Boys	1.5
			Combined	Girls	0.9
				Boys	3.5

This can be compared with the later findings of the Child and Adolescent Component of the National Survey of Mental Health and Well-Being (Sawyer et al 2000, p.20). In this study, 112% of all adolescents and children, or 355,600 people, had the

disorder. By sex, 15.4% (250,000 young people) were male and 6.8% (105,000 young people) were female. By age, ADHD was more prevalent in the 6 – 12 years age group (19.3% of males and 8.8% of females), when compared with young people aged 13 to 17 years (10% of males and 3.8% of females) (Sawyer et al 2000, p.20).

2.2 Causes

Attention-deficit hyperactivity disorder is a "psychiatric diagnosis applied to children and adolescents [and now adults also] who exhibit developmentally inappropriate levels of inattention or impulsivity-overactivity (Du Paul 1998, p.24). There remains uncertainty as to the precise causes, but a significant amount of research over the pas t 20 years points to biological factors. There is also good evidence to suggest that the condition is hereditary. Research has found that

> "most ADHD kids have at last one blood relative with an attention disorder. At least one in three fathers who had ADHD symptoms in their youth have children with ADHD tendencies. Another study, which analyzed data from 1,938 Australian families with twins and other children ages 4 to 12, found when one twin had ADHD, there was a 91 percent chance that the other identical twin would also have it" (HealthAtoZ 2004)

National Institute of Mental Health has shown that there is less activity in areas of the brain that control attention. Previous psychological or sociological causes have largely been discounted. For example, "dysfunctional families, too much television, poor schooling, food allergies, refined sugar, food additives or other environmental factors. Undetectable brain damage or minor head trauma, once theorized as a possible cause of ADHD" have been disproved (HealthAtoZ 2004).

3.0 Visual Impairment

Education Queensland go to great lengths to classify what is and what is not visual impairment, as formal support is provided on the basis of whether or not the student is classified by EQ as vision impaired. Hence, EQ (2004a) "supports students with a vision impairment who may have":

- Distance visual acuity of 6/18 or worse. That is, the student must stand at 6 metres away from a letter in order to read it, whereas a person with normal vision could read it from 18 metres.
- Restricted visual fields which adversely affect visual functioning

- A condition which results in the deterioration of vision
- Damage to the visual centres of the brain causing reduced visual functioning
- A combination of any of the above.

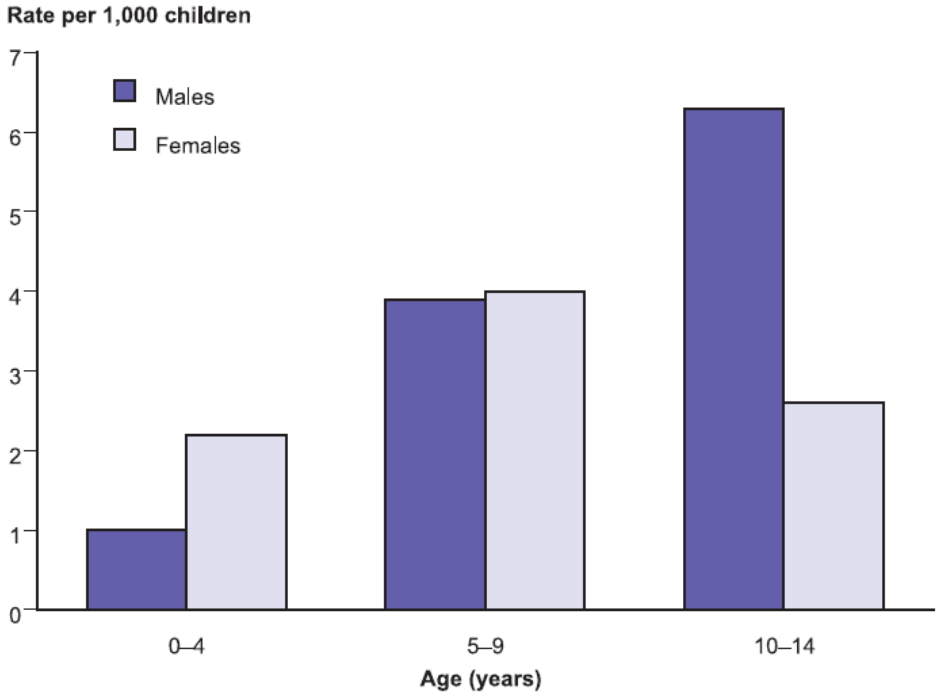
However, EQ determine a student not to be vision impaired when:

- They have normal vision in one eye
- Strabismus (squint, lazy eye or turned eye)
- Colour vision defect and normal vision measurement
- Visual perceptual problems and normal vision measurement (an inability to interpret written symbols), which are determined to be learning rather than visual impairments.
- Some conditions that affect the muscles of the eye

While these classifications may be determinative as to the eligibility of a particular student to participate in formal EQ support programs, they are ultimately meaningless in the situation where the student is included within the regular classroom. The teacher must make a determination as to which aspects of their lessons present difficulties for any student, whether formally classified as impaired or not.

3.1 Prevalence

In 1998, “approximately 13,600 children were estimated to have some form of visual impairment or loss of sight (not corrected by glasses or contact lenses). Of these, 59% were boys and 41% were girls” (AIHW 2002, p.7). In 1998, 3.5 per 1,000 children aged 0-14 years had some form of visual impairment. Visual impairment was highest among boys aged 10-14 years and girls aged 5-9 years. Most visual impairment was “partial loss of vision. Of children aged 0-14 years, 3.3 per 1,000 were reported as having this condition, with higher levels for boys (3.7) than girls (2.9). Only 0.2 per 1,000 children had a total loss of vision. Only 8% of visual impairment was due to complications of surgery, injury and other external causes” (AIHW 2002, p.7).



Note: Estimates for boys aged 0–9 years, and for girls aged 0–14 years, have an associated relative standard error of 50% or more. Estimates for boys aged 10–14 years have an associated relative standard error of 25% or more.

Source: AIHW analysis of ABS 1998 Survey of Disability, Ageing and Carers unit record file [Table A5.2].

Figure 5.2: Visual impairment rates for children aged 0–14 years, 1998

Source: AIHW 2002, p.7

3.2 Causes

Vision impairment can result from a diverse range of causes. These include "diabetes, glaucoma, stroke, brain injury, eye infections, viruses, accidents, and congenital conditions such as albinism (USQ, ND). Blindness can be present from birth, or have resulted at any time. It can be a permanent or sometimes temporary condition. In Australia the most common causes of vision impairment in children are albinism, cataracts, high myopia, optic atrophy, retinitis pigmentosa, macula degeneration (EQ 1998, p.6).

4.0 Educational Placement Options

Education Queensland policies CS-05 and SM-15 are determinative as to the placement options that should occur in Queensland (hence the extensive listing of

them here as ultimately the only options for a Queensland teacher are to be compliant with this policy). See especially the following sections.

CS-05 section 2.1

2.1 In making provision for students with disabilities, Education Queensland:
(a) is accountable for equitable educational provisions that ensure opportunities for optimal outcomes for students;
(b) recognises and acknowledges the different characteristics and circumstances of the entire range of students in schools - schools have a responsibility to cater for the educational implications of student differences;
(c) acknowledges that a local school is the first point of contact for the initial enrolment of all students of compulsory school age, and that this school has the responsibility for initiating ascertainment procedures;
(d) is committed to supporting inclusive curricula through an array of educational options and a flexible and efficient use of resources to support these educational options;
(e) supports the use of collaborative processes to develop and implement documented curricula for students with disabilities;
(f) will provide staff with opportunities to develop an awareness of and an ability to gain access to information and programs to meet the needs of all students in their school;
(g) recognises that parents and primary caregivers and students have the right to be involved in educational decision making and to contribute to the effectiveness of the process;
(h) requires that documented operational plans that reflect the current departmental strategic plan be developed at schools, district offices and central office to incorporate procedures for ongoing review and evaluation;
(i) will liaise at all levels with other government and non-government agencies to raise community awareness of the issues concerning disability and will promote effective and efficient delivery of services; and
(j) will continue to provide support for students with disabilities from early education to the end of their schooling.

CS-05 section 2.1

3.2 The role of the school is to provide, within a framework of fair and equitable practices and an organisational structure that supports students with disabilities and considers the needs of all students through:
(a) participative development and review of school planning and accountability;
(b) deployment of resources to address the needs of all students;
(c) identification and planning for provision and allocation of resources;
(d) development and review of appropriate curricula that are responsive to the needs of students;
(e) provision of needs-based professional development activities for all staff;
(f) monitoring and supporting effective learning and teaching;
(g) participation and involvement of parents/caregivers;
(h) participation and involvement of the community;
(f) management of the school budget to ensure it considers those needs of students

with disabilities; and
(i) use of ascertainment process when required (refer to SM-15: Ascertainment Procedures for Students with Disabilities).

SM-15 section 1.2

1.2 Ascertainment is based on the educational need arising from a disability. The process consists of:
(a) identifying and referring students with disabilities who may need specialist educational support;
(b) identifying the support needed;
(c) identifying programs which can support this need; and
(d) reviewing the recommended level of specialist educational support.

Section 3 and 4 of SM-15 cover the requirement for, and the processes involved in the determination of the level of support to be provided. These are determined on a case by case basis, and therefore, no determination here can be made as to the likely arrangements for either condition.

TASK 2

5.0 Meeting the Needs of Visually Impaired Students and Students with ADHD in the Classroom

In meeting the needs of both visually impaired students and those with attention-deficit hyperactivity syndrome, there are a number of approaches that can be taken. These have been categorised into both modifications/accommodations and educational approaches/instructional methodologies. In this instance, modifications/accommodations refers more to structural and physical arrangements to accommodate the students. This includes both the physical orientation of the classroom, as well as timetabling and sequencing issues. It will also address extra-curricula assistance, beyond that ordinarily provided within the classroom. This is in recognition of the principle of least restrictive environment (to be discussed in more depth later), in that the student is to be integrated into the regular classroom as much as possible, with additional assistance to be made available where necessary and practicable.

‘Educational approaches/instructional methodologies’ refers to the pedagogy of inclusive teaching, with particular reference to the conditions of visual impairment and ADHD. In recognition of the principle of inclusive education, the discussion will address both conditions together, where possible and appropriate, as good inclusive teaching practice can be inclusive of all students regardless of disability. A number of strategies have been suggested as part of the literature relating to each disabilities, but it has become clear that many of these strategies are transferable between ‘conditions’ and can be more broadly applicable, to be included in all teaching practice where possible. While assessment approaches and behaviour management techniques will be addressed separately, it will also become obvious that the net result of the approaches and methodologies will be positive behaviour management outcomes. In fact, I suggest that where greater reliance is placed on behaviour management, this may be indicative of deficient pedagogy, or representative of a defeatist attitude as to the achievement of positive outcomes for those students with disabilities. That is there has been a shift in focus from teaching them to keeping them quiet or well behaved.

5.1 Modifications, Accommodations, Educational Approaches, Instructional Methodologies and Assessment

The concept of ‘Least Restrictive Environment’ requires that students are to be fully included as much as they can be, with segregated, ‘restrictive’ special education being the fall-back option. This is to occur only when “the nature or severity of the disability of a child is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily” (Individuals With Disabilities Act 1990, USA). Special classes are seen as restrictive because they “may limit the student’s opportunity to access the experiences available in regular school or regular class” (Foreman 2000 in Tracey 2002, p.14).

Importantly, the belief that an individual assessment of each student should be determinative as to where they placed was developed, and can be seen in current Australian approaches. As such a number of modification or accommodations must be put in place for students with ADHD or who are visually impaired. Likewise,

when the student is accommodated within the regular classroom, the educational approaches and instructional methodologies must also be appropriately flexible and addresses the disability.

5.1.1 ADHD

For students with attention-deficit hyperactivity disorder, we must consider two elements. First, what are the likely triggers for undesirable behaviour or poor performance, and second, what strategies can be put in place to overcome these. Blakers (ND) has identified 8 situations in which such students can be "at risk." They include:

- The task is too difficult
- Work is required for extended periods
- There is little supervision
- There has been little or no preparation for the task
- The teaching is presented in lecture format with little or no interaction
- Learning tasks take sudden jumps
- Output demands suddenly increase
- Transition times are not structured and planned

These triggers clearly hint at the likely responses to be implemented. In many cases these responses require a departure from traditional methodologies. This is in recognition of the fact that "the traditional classroom requires of the ADHD student everything that he or she is not good at: sitting still and not talking, concentrating on skills work, and not acting or speaking impulsively" (Ruschko in Brim & Whitaker 2000, p.57).

Generally there is a consensus of opinion that approaches should generally aim at gaining attention, maintaining motivation, and improving communication. The following table lists various responses and their justification:

Response	Justification	SOSE/Science Applications
To increase the use of positive reinforcement. Teachers must balance any negative comments or punishments with positive reinforcement (Reis 2002, p.175).	Low self-esteem can decrease motivation to tackle tasks (Brim & Whitaker 2000, p.59). Positive reinforcement increase self-esteem and hence motivation. The student believe they are making progress and succeeding, so a motivated to continue on that positive path.	Apply this generally across all SOSE/Science teaching.
To bridge from	Students with ADHD "must have	Ensure that the sequence of

previously taught concepts to new concepts (Reis 2002, p.176). The new information must be delivered in the context of previously taught lessons.	time to incorporate new information into their pre-existing knowledge base and to use it as a springboard for additional abstractions and generalisations" (Reis 2002, p.176). Again this builds confidence through familiarity, showing the student that if they could master the previous topic, they can also succeed with the current one.	SOSE and Science specific material is delivered in a logical sequence. Ensure that the concepts build gradually and reinforce new material being delivered.
To allow students to "apply concepts they have studied to the reality of their daily lives" to class work and assessment(Reis 2002, p.176).	"When students with ADHD attach personal meaning to information they to understand and recall it much better" (Reis 2002, p.176). The student will be empowered through the inclusion of their own experiences into the learning process, hence developing feelings of 'ownership', familiarity and confidence. This helps alleviate fear of rejection and failure and develops motivation.	Make clear connections between scientific principles in theory and their application to the real world (already a formal requirement within curricula). SOSE curriculum lends itself to the investigation of real world case studies
To vary delivery and assessment methods to incorporate visual, kinaesthetic and other means of student engagement.	Students must be actively engaged in the learning process as opposed to simply sitting still and listening/writing. Visual, and active engagement strategies, alleviate issues of hyperactivity and actually draw upon this element of the disability for positive gains.	Science lessons should incorporate experimental activities, and Science and SOSE classes could incorporate site visits and other field trips and other practical activities.
To allow student to structure their own environments. This can relate to the physical environment or to the sequence of self-guided study and assessment (Brim & Whitaker 2000, p.59).	ADHD students can find it difficult to be settled and attentive within traditionally rigid classroom settings. Where the lesson permits, to allow a student to work on the floor, or outside, for example, allows the student to work within their own parameters.	Apply this generally across all SOSE/Science teaching.
To manage the difficulty of work being set, and assessment items, and to 'break-down' that work into manageable parts, with clear goals throughout.	The student may not be able to determine how to begin, or may lose site of the bigger picture during a longer or more complex piece of work. By breaking up the work, the student can address each part successfully, whilst having the bigger picture explained to them.	Apply this generally across all SOSE/Science teaching.

5.1.2 Visual Impairment

Visually impaired students "have reduced opportunities to access information and less contact with the physical and social environment. As other senses are not as effective as vision in gathering the information, the learning environment has to be structured to provide students with opportunities to participate in activities and gain from experiences that may otherwise be denied them" (EQ 1998, p.15).

Visual impairment is a major barrier to the transferal of information between teacher and student. This issue has been addressed in relation to 'concepts'.

> Concepts are formed as a result of all incoming sensory information and perceptions being processed and combined in the brain. The range and variety of experiences forms the basis of concept development. Concepts are constantly changing as new information is gathered. Vision impairment reduces the opportunity for first-hand experience, so concept development can be slower, or in a different sequence from sighted peers (EQ 1998, p.28).

Hence, any strategies employed aim at facilitating this concept development.

Strategies can be categorised into two main areas, physical adjustments and pedagogical adjustments. Physical adjustments cover basic elements such as lighting and contrast, working distance and other seating arrangements, and the use of differing media. This will not be investigated further however, extensive details of these types of adjustment can be found at the Royal Blind Society website http://www.rbs.org.au/about/factsheets/Helping a student with VI.doc.

They have developed eight key suggestions to assist teachers in developing educational approaches/instructional methodologies to meet the needs of vision impaired student. They are

1. Include the student with a vision impairment in all activities.
2. Encourage the student with a vision impairment to take leadership positions just as other children do.
3. The same disciplinary rules that apply to the rest of the class should apply to the student with a vision impairment.
4. Encourage the student with a vision impairment to move about the classroom to obtain his/her materials or visual information.

5. The student with a vision impairment may not be aware of, and therefore may not become interested in, events occurring at a distance from him/her. Extra verbal clues may be necessary.
6. All children are sensitive to peer criticism. Your own acceptance of the student with a vision impairment will serve as a positive example for the class.
7. The student with a vision impairment may bring adaptive aids into the classroom. Encourage him/her to use the aids as needed and to answer any questions that others have about the aids as they arise.
8. Because some students with a vision impairment prefer not to bring attention to their impairment, they will use special aids and assistance from others only when absolutely necessary. In general, you should respect the student's wishes but, if you suspect they really need more aids or assistance than they are using, you may wish to discuss this problem with a qualified professional.

As with some differentiated instruction, alternative means of assessment may also need to be developed. Extra time may need to be provided where this is possible, and the relevant materials required may need to be available in an accessible format. Assessment criteria may also need adjustment to ensure that the more valuable components of the task are being assessed. In other words, presentation and formatting requirements may be adjusted or waived.

5.2 Behaviour Management

Many of the strategies discussed above have inevitable behaviour management outcomes. When teaching is relevant and engaging, behavioural problems are minimised. Behaviour management in this instance therefore, refers to the more explicit techniques for moderating behaviour in instances of disruption, or more appropriately, refers to what Reid (1999, p.2) calls classroom management. However there will still be unavoidable overlap. Several lists have been included. While not exhaustive, they are lengthy. However, it is necessary to include them, as they convey best-practice on the management of behaviour for these students, and will provide a useful resource for future reference [for my own development].

Blakers (ND) 12 measures for the prevention of unacceptable behaviour in students with ADHD. They include:

- Provision of clear communications and expectations rather than rigid rules
- Making consequences clear and immediate
- Teacher modeling of appropriate behaviour
- Negotiating procedures for difficult times with the students

- A clear warning system
- Explanation and display of non-negotiable rules
- Negotiable rules reviewed and adjusted regularly
- Clearly outlined expectations
- Negotiated rules and expectations for specific purposes, e.g. group work, independent work,
- Paired activity.
- A classroom or individual point system
- Being well prepared for lessons; control is more difficult when you are unprepared.

This summary has consolidated much of the current thinking on this issue.

While in the first instance these steps should be applied in a positive and constructive manner, there are times when a reprimand is required. In fact, Abramowitz and O'Leary (in Reid 1999, p.3), have determined that for ADHD students, praise alone is not sufficient. Hence they have provided the following tips for the delivery of reprimands:

- Deliver reprimands in a calm and unemotional manner
- State reprimands firmly
- Make reprimands brief and to the point
- Give reprimands as soon as possible after the inappropriate behaviour
- Avoid giving mixed messages (including positive statements)
- Increase effectiveness through close proximity, eye contact and physical contact.

This approach is clearly appropriate to all teaching situations, including the teaching of the visually impaired (except eye contact).

The other key to behaviour management for ADHD students is good communication. Again, Reid (1999, p.3) has provided a list of "tips for giving effective directions." These include:

- Get attention before giving directions
- Keep directions short and to the point
- Be specific in the behaviour the student must perform
- Avoid giving multi-step direction all at once
- Keep directions clear
- Give directions three times
- Check for understanding

In summary, behaviour management for students with ADHD is about maintaining the same expectations of behaviour, but communicating those expectations and responding to inappropriate behaviour in a way that is tailored to those particular students.

Students who are visually impaired may be limited in their "awareness and knowledge of the community, its responsibilities, and the relationships between individuals." They may "not be able to see interactions between others and this may affect the knowledge and understanding of the different meanings that silence can convey; the social conventions about personal space; the conventions for initiating and continuing conversations (EQ 1998, p.21). Hence this may negatively impact upon their behaviour in the classroom.

Little is written, however, as to specific approaches for behaviour management of visually impaired students. However, the Blakers (ND) 12 measures for the prevention of unacceptable behaviour in students with ADHD are equally applicable to any student group, and especially to student with a vision impairment. When these steps are followed, with the appropriate modifications, accommodations, educational approaches and instructional methodologies specific to a vision impaired student, they should provide a good methodology for behaviour management.

6.0 Conclusion

This paper can be summarised with the word 'breadth'. The approaches here can be applied more broadly than to the disabilities at hand, and the disabilities discussed require the broadest range of strategies to provide good educational outcomes for the students. Hence, the "complexities and chronicity of ADHD require the longterm use of multiple interventions across classroom and home settings" (DuPaul & Eckert 1998, p.60).

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