Teaching Students with Sensory Impairments
Research and Reflections

ROUND TABLE ON INFORMATION ACCESS
2004 National Conference
15-18 May, 2004,
Carlton Crest Hotel, Sydney

Literacy and Australians with Low Vision

Dr Mike Steer, Senior Lecturer, Vision Impairment,
Dr Gillian Gale, Adjunct Lecturer, Vision Impairment.
Renwick College
Royal Institute for Deaf & Blind Children &
The University of Newcastle

ABSTRACT

The topic of literacy has in recent years received considerable attention by the Commonwealth and State Governments. Few would argue with the notion that in our country, literacy is usually regarded as a birth-right. In a society that places a premium on the attainment of literacy, problems and issues abound. Although a child's congenital vision impairment does not invariably prevent the attainment of literacy, and similarly an adult's adventitious vision impairment does not invariably preclude the re-attainment of literacy, low vision presents some unique challenges that must be addressed to ensure full literacy. This presentation will focus upon the weighty issues concerning low vision and the phenomenon of literacy. It will review several of the issues and concerns that confront specialist teachers of students with vision impairments and provide insights into their impact upon professional practice.

Vision impairment is a huge and largely unrecognized problem in Australia. As Vision 2020 (2004) point out, despite the availability of technological, financial and human resources, a significant number of Australians face unnecessary vision impairment and vision loss. Almost 50% of legal blindness and 70% of visual impairment in our country are caused by conditions that are preventable or treatable. Vision2020, for example estimate that there are currently some 212,000 Australians in our nation of 19 million people, who have vision impairment due to under-corrected refractive error that could be eliminated with appropriate glasses. This means that several hundred thousand Australians of all ages are, for example, unable to read the poison warnings on a can of pesticide, a letter from their child's teacher, or the front page of the Australian, or the newspaper of their choice. As Bush (1990) has indicated, "parents who cannot read often raise children who cannot read" p. 143.

There are, as the American Foundation for the Blind (2004) has pointed out, few skills more fundamental to making one's way in the modern world than being able to read. For the child or adult with low vision, there may be many paths to becoming literate. For example, such devices as magnifiers and software that simulates a human voice while reading the computer screen can welcome someone with low vision to the world of books. However, it needs to be made clear that reliance on auditory input alone will not make a child literate.

In our antipodean form of Western industrialised society, we place a high premium on the acquisition of literacy, yet problems and issues abound. For example, for children and adults with vision loss to achieve high levels of literacy, or to maintain literacy skills, there must be teachers who are knowledgeable, skilled, and trained in the most promising instructional practices. Unfortunately, many children and adults have limited access to well-trained teachers, because opportunities in Australia for these teachers to acquire updated training and resources are severely limited. There are less than half a dozen university programs across the nation offering course work either in the area of low vision or in literacy acquisition for students with low vision.

Literacy acquisition

Difficulties in teaching literacy are by no means confined to the vision impaired population. A large number of issues also confront the teaching of literacy skills in our schools and colleges. Proponents of the "whole language" approach to literacy acquisition have for some years urged that basal readers, a cornerstone of literacy instruction for most of the 20th century, be abandoned. Critics have suggested that teachers, rather than basal readers are at the root of the literacy acquisition problem. Based upon the perennial notion that the school system is failing, the mass media assert that a focus on phonics is the saviour of children who are having difficulty learning to read. Since, as Koenig (1996) has pointed out, so many people have a stake in promoting literacy or benefiting from it, "it is not surprising that many are involved in trying to shape literacy practices" (p. 55).

It is an overstatement to propose that rejuvenation is on the horizon in the way that vision impairment educators are thinking about, defining and teaching literacy to those on their caseloads in schools throughout Australia. In 1998, the Commonwealth Government announced its commitment to developing a broad policy framework for improving quality in schooling and enhancing educational outcomes for all students. The approach focussed as well on the importance of parental choice in schooling and the need for diversity in education provision (Commonwealth Department of Education, Science and Training, 1998). In March 1997 Commonwealth, State and Territory Education Ministers agreed to the following national literacy and numeracy goal:

That every child leaving primary school should be numerate, and be able to read, write and spell at an appropriate level.
The Ministers also adopted a sub goal:

That every child commencing school from 1998 will achieve a minimum acceptable literacy and numeracy standard within four years.

These national goals were intended to represent community expectations for all schools in literacy and numeracy and the policy papers issuing from the initiative make it clear that the goals are inclusive of all children, including those with disabilities.

As an outcome of the initiative, the Government commissioned a paper; *Literacy, Numeracy and Students with Disabilities* (van Krayenoord, Elkins, Palmer, Rickards, Colbert and others, 2000) that included some information about students with low vision. The following year, the Government funded further research that produced a paper entitled *Literacy and Numeracy Acquisition (Including the Role of Braille) for Students in Australia Who are Blind and Vision Impaired* (Jolley, Gale, Gentle & Steer, 2001). This research, conducted by experts in the field, produced a report with 16 recommendations, many of which are pertinent to the focus of the present paper, but so far none of the recommendations have been implemented.

That literacy is still high on the political agenda is a reflection of the recent Australian Labor Party promise that should it gain office it will invest $80 million to give parents and children help in developing a culture of reading. According to a recent press announcement by Opposition Leader Latham, a Read Aloud Australia policy initiative will aim at building the literacy skills and learning capacity of the youngest Australians.
Labor's plan includes:

- Launching a *BookStart* program to issue up to three free books to the parents of every new baby to get them on the path to regular reading. We expect to issue over half a million books every year.
- Building a parental literacy network in Australia so that parents have the skills they need to read to their children. It has been suggested that the policy initiative will help more than 4500 parents every year.
- Appointing *Read Aloud Ambassadors* and establishing a *Read Aloud Week* to emphasise the importance of reading to children from an early age.
- Work with State and Territory Governments to develop comprehensive neonatal screening for hearing and sight; and
- Working with the States to include early reading programs in the Personal Health and Development Record Books (better known as the Yellow Book or the Blue Book). (Latham & Collins, 2004).

However, should the policy ever be implemented, we as professionals must question whether or not the Government will also provide books for children who are functionally bind or vision impaired.

Students with low vision are currently at the vortex of discussions by SPEVI, the national vision impairment professional special interest group, over teaching Braille reading and writing skills. The issue of Braille use with students who are functionally blind is relatively clear-cut. However, such is not the case for students with low vision. Some professionals question the efficacy of reliance on print for many students with low vision, particularly those falling within the parameters of legal blindness.

Allied with these developments and a particularly important issue for teachers, parents and students, is the dearth of reading materials in large print for students with low vision.

This brief paper will focus upon several of the major issues concerning low vision and the acquisition of literacy. It will review a selection of the issues and concerns that confront specialist teachers of students with vision impairments and provide insights into the impact of the issues upon professional practice.

The major issues

What follows is a selection by the authors of the eight major issues facing teachers, and parents of many Australian students with low vision. The issues presented in the following collection have not been ranked in the order of their importance, but have been selected as focal areas that each warrant thought and discussion.

1   The issue of visual fatigue

A series of important factors relate to the way in which visual fatigue affects literacy in students with low vision and the proposition that usually such students read more slowly than their sighted peers. This is because reading is harder for them, so that they are simply unable to get through the amount of reading they need. Further, current reliance on, and the mandatory use of computers in many schools results in some students with low vision experiencing sometimes chronic visual and physical fatigue. (Anshell, 2000).

A great many well-known strategies are recommended for fully sighted computer users to help them avoid visual fatigue. Many of these strategies are not suitable or possible for students with low vision and it is sometimes not possible to obtain an appropriate ergonomic environment so that literacy acquisition suffers. Among the important factors to be kept in mind by teachers and parents when dealing with students who have low vision are the following:

- the need for enlargement; usually onto A3 sized paper, which makes reading the material difficult and singles them out as being different.

- the need for early training in the use of visual aides.

- the need for students to become aware of the nature of their own vision impairment and to realise the limitations and the possibilities.

- the need for specialist and generalist teachers and all school staff to be aware of and mediate the environment by, for example:

  increasing contrast;
  enlarging images;
  minimising glare;
  cutting down visual clutter;
  using tactile and auditory technologies; and
  using braille.

2   The issue of emphasising vision use

Skilled specialist teachers are able to make creative accommodations and modifications to the school's core and expanded core curricula for students who are blind or vision impaired. For example, reading materials can be transcribed into Braille, tactile or tactual diagrams created, and curricular areas deemed 'too visual' can be modified to emphasise the non-visual components. Many students can work with enlarged print or by using low vision devices (LVDs). Because accommodation in such instances is not particularly complex, some teachers, as D'Andrea and Farrenkopf (2000), have pointed out, assume that those students need less help than their Braille-using peers. Nothing could be further from the truth. Such students generally require intense instruction "precisely because they are able to use print" (p. 2). They also need to have a very clear understanding of their vision impairment and the way in which it affects their learning, the way in which they can modify their environment as well as areas of learning that are difficult for them to access and strategies to compensate for this – they must learn to self-advocate. They need to be taught how to maximise the use of the vision they do have, so that they become more efficient in performing visual tasks. This instruction might involve their learning to use specific LVDs, for example CCTV's, visualettes or other types of hand-held magnifier. It might, for example, involve teaching the student to modify lighting patterns, perhaps to reduce glare, so that a particular task can be completed. It might include a teaching program designed to increase a specific set of visual skills.

According to Corn (1986), there are at least three approaches that may be used in a program targeting visual skills acquisition. These are:

(a) Visual stimulation: i.e reinforcing visual functioning by generating a visually stimulating environment; that is, presenting a variety of stimuli that encourage the individual's visual system to respond (Corn & Koenig, 1996). The visual stimulation approach emphasizes such basic skills as attending to a light source, attending to a single object, rudimentary tracking of a single object, shifting the gaze from one abject to another and reaching for the object (D'Andrea & Farrenkopf, 2000, p. 3).

(b) Visual efficiency: i.e. through providing instruction aimed at helping the student learn to discriminate fine detail, or differentiate between outline and inner detail, or to discriminate patterns, or translate from concrete to abstract

forms (e,g a picture of a ball to represent the printed word ball (Barraga, 1970). The literacy tasks that our workplaces and private lives require are presented in diverse and often, for individuals with low vision, visually challenging formats. For example, the most recent study on U.S. national literacy proficiencies reported on individuals' ability to perform such varied tasks as planning travel arrangements for a meeting using a flight schedule, interpreting instructions from a warranty, and balancing a cheque book. Each of these tasks involves the use of a variety of visual efficiency skills. To accomplish these tasks many of our students with low vision would need to use a prescribed optical device for optimum viewing. Yet the application of visual efficiency skills and the use of prescribed devices are not naturally developed skills (Corn & Koenig, 2002). Examples of the visual efficiency approach include specific activities created to help the student learn how to discriminate fine details in pictures and designs, to differentiate between outlines and inner details in pictures or diagrams, to discriminate patterns, to differentiate between light and dark intensities and to transfer visual skills from concrete forms (for example a ball) to representational forms (a picture of a ball), to symbolic forms, for example, the printed word ball (D'Andrea & Farrenkopf, 2000, p. 3).

(c) Visual utilization (an American synonym for vision use), involving a focus on teaching the student to use his/her vision more effectively. In a vision utilization program, instruction focuses on teaching the student to modify the environment, and on using appropriate low vision devices that maximize functional vision. As examples, students can be taught to use task lighting and a handheld magnifier to located a friend's telephone number in the phone book (D'Andrea & Farrenkopf, 2000, p. 3).

In order to help students with low vision acquire literacy skills, teachers, both specialist and generalist, must first understand the child's visual and literacy needs, and then think of ways that these skills can be inserted into the school day, even if, as D'Andrea and Farrenkopf, 2000) have pointed out, "it appears to take time away from other curriculum areas" (p. 4). Visual skills instruction taught in an isolated, task centred approach has been challenged by some authorities in the vision impairment field (Ferrell & Muir, 1996), since instruction is best given within a meaningful context that is important and relevant to the child ((D'Andrea & Farrenkopf, 2000, p. 3). It is essential for these skills to be started at an early age. A three-year old can be given a magnifier to look at the ants on the path and a monocular to identify the parrot in the tree so that the child is raised with the knowledge that there is an interesting world beyond his field of vision and that he has ways of accessing it.

3   The issue of literacy assessment

Koenig (1996) has pointed out that prior to 1990 there were few, if any, assessment processes or strategies for selecting appropriate literacy media for students with low vision. Teachers, he claimed (p. 58), generally made unilateral decisions, based on their 'professional judgment' without much input from others on the school's educational team. In 2004, perhaps as a

consequence of recent US Braille legislation, teachers can profit from a wealth of overseas research on objective assessment strategies for selecting literacy media for students with low vision. This is because most such legislation mandates the use of some kind of assessment to identify students who will require curricular or materials modification in order to be successful in mainstream classes.

Typical of the available supports in this area are the highly structured protocols outlined in Chapter 11 of Corn and Koenig's (1996) classic *Foundations of Low Vision* and Koenig and Holbrook's *Learning Media Assessment* (1995) text and at the school systems level, the Indiana Department of Education's (1996) *Functional Literacy Assessment Guidelines.*

4   The issue of print media and literacy

Part of functional literacy, as Koenig (1996) points out, is the ability to gain access to print independently when information is not in one's preferred medium (p. 58). Consequently, teachers (and rehabilitation professionals) should focus on providing a range of alternatives for doing so. Thus it is important to determine whether or not the particular student will benefit from using optical devices in preference to large print or Braille or whether a combination of the two media is viable. Some students who are unable to sustain the reading of large print unaided can become efficient readers with optical devices (p.58). As Bell (2004) has pointed out, recent research supports the necessity of providing direct instruction in the use of prescribed optical devices to school age children with low vision (Corn, Wall, & Bell, 2001; Corn, Wall, Jose, Bell, Wilcox, & Perez, 2002). These studies found positive impact on areas of literacy, including reading and accessing common core and expanded core curriculum for students with visual impairments.

Through a recent Delphi study, Corn and Koenig (2002) found that instruction in the use of optical devices should be included in best practices for literacy instruction. More specifically, best practices in the instruction of prescribed optical devices should include 30 minute to one hour sessions of direct instruction for both near and distance devices, one to three times a week, beginning in kindergarten and continuing through high school graduation. Despite such research, integrating the use of optical devices into school programs continues to be a challenge for teachers of students with visual impairments and for their students with low vision. Integrating optical devices into literacy programs through the use of IEP goals and objectives offers participants creative ways to include approaches for instruction and the use of optical devices into their low vision programs. However, one of the main obstacles to students making effective use of their low vision aids remains a social issue. Many students see the uses of aids and enlarged print on A3 sheets as singling them out as 'different' from their peers

5   The issue of literacy levels

Students who use large print or LVDs to acquire literacy have the same types (or levels) of need as do those using Braille as their primary medium. In an attempt at demystifying the topic, Koenig (1992) has provided the following taxonomy, that might be applied to all students, including those with low vision:

- *Emergent literacy*, refers to a young child's ability to bring meaning to reading and writing activities;

- *Academic literacy* refers to the type of reading and writing mastery skills acquired by children during their school years; and

- *Functional literacy* refers to literacy activities that relate to the day-to-day completion of practical tasks, e.g. reading a street sign or a menu. (D'Andrea & Farrenkopf, 2000, p. 5.)

The acquisition of skills at all three levels is essential for students, and it is essential that teachers have a central role in supporting students to develop these vital abilities.

6   The issue of emergent literacy

The concept of emergent literacy, as Stratton(2004) has pointed out, evolved during the past decade as the result of new information on the ways that young children develop an understanding of reading and writing (Gibson, 1989; Hiebert & Fisher, 1990; Neuman & Roskos, 1993; Rex, Koenig, Wormsley, & Baker, 1994). Emergent literacy may be described as the process of learning about the environment that leads to the development of meaning and concepts, including concepts about the functions of reading and writing. Koenig (1992, p. 279) stated that emergent literacy "is characterised by the early development of understanding that abstract symbols have meaning and that people use these symbols for the communication of ideas."

The process, Stratton (2004) asserts, begins at birth, involves all aspects of a child's development, and continues throughout life (Clay,1991; Neuman & Roskos, 1993; Rex et al., 1994. It begins with the child's early nonverbal and verbal interactions with others, awareness of the environment, and explorations. It continues as the child gains intentional language, broadens explorations, and builds concepts. It progresses as the child gains an understanding of the functions of symbols and language, experiences with books, and experiments with writing. Out of these experiences, the child gradually builds concepts about reading and writing. The focus of emergent literacy is on learning, rather than on teaching, and on the child as an active learner. The teacher's role is to facilitate and extend child-initiated learning

The emergent literacy process is centered on meaning and is a constructive (Stratton, 2004), functional and interactive process. It is constructive in that it develops internally as the child builds concepts about the environment (Neuman & Roskos, 1993) and culture (Walker-Dalhouse, 1993) on the basis of active explorations and meaningful language. It is functional, in that its purpose is in that it allows the child to perform activities in natural situations,

such as reading directions, scanning a map, or recording a telephone message (Stratton, 2004). And it is interactive because it involves feedback from adults or other children on child initiated play and language. The purpose of adult-child interactions, according to the emergent-literacy perspective, is to foster the child's development of the literacy process, rather than to help the child get the "right" answer (Clay, 1991).

Children with low vision, therefore, need to be exposed to a wide a variety of life experiences as possible and be involved in everyday activities that focus on literacy. As D'Andrea and Farrenkopf (2000) have pointed out, using Lowenfeld's (1973) principles of special methods, i.e. learning by doing, providing concrete experiences and providing unifying experiences, the teacher is able to encourage development of specific visual skills in ways that enhance emergent literacy skills. At this level of Koenig's (1996) taxonomy, a great deal of useful information about the ways a child uses his or her vision can be obtained by observation in a variety of settings and lighting conditions. Consultation with parents, family members, and care-givers provides another important avenue of information acquisition.

7   The issue of academic literacy

Low vision intervention focuses on maximising an individual's ability to perform a variety of visual tasks identified as important and desirable. As Topor, Hall, Lueck and Smith (2004) have pointed out, when a youngster is attending school and undertaking academic work, the focus differs, sometimes dramatically from that of efforts designed for very young children and children with multiple disabilities (p. 353). For example, a team process is vital in implementing special programs across various home, community, school or pre-vocational and vocational settings.

Koenig (1996) has highlighted a growing distinction between basic academic literacy and practical functional literacy that is required for independent and successful functioning in society and discusses the importance of teachers measuring and documenting achievement in reading and writing in order to provide accountability and to encourage minimum levels of student accomplishment. Noting the difficulties involved in establishing criteria for measuring writing skills, he recommends that they should be "commensurate" with reading skills

Academic literacy is important for a variety of reasons. It is a key indicator of success at school, and this factor is considered important by society generally. Several occupations, notably journalism and teaching require these sorts of literacy skills. Further, a student can continue to develop and expand literacy skills, and learning in general, using the basic reading and writing skills that one acquires in school (Koenig, 1996, p. 63).

To acquire competence, comfort and flexibility in the area of literacy, students with low vision must learn how to use various LVD and technological devices, how to modify their surroundings to best enhance their visual abilities, and how to use their vision efficiently for close and distant tasks. These skills must

generally be taught by specially trained teachers, so that the students can apply them at home and at school. To further reinforce skill acquisition, the specialist (generally a visiting) teacher, can instruct the regular classroom teachers and parents in ways to implement the same skills, techniques and environmental modifications.

Academic demands will change quite dramatically throughout a student's school life. Koenig (1996) for example, has pointed to the growing recognition by teachers that the types of literacy skills that are acquired at school, for example, reading and responding to connected pieces of text, or writing stories or term papers, are unique to educational settings (p. 63). He has suggested in consequence that teachers employ more practical applications of literacy that are commonly employed in the workplace, for example, writing short memos to fellow employees, completing forms, writing cheques and reading signs.

8   The issue of functional literacy

The taxonomy level defined by Koenig (1996) as functional literacy involves skills in "negotiating" one's daily experiences and emphasizes the uses of reading and writing. The focus shifts from school-based literacy to real-world practical applications of reading and writing. The two characteristics of functional literacy for individuals with visual impairments include the successful accomplishment of tasks requiring reading and writing, and "the use of skills or tools to independently gain access to regular print when literacy tasks require communication with others in this medium (p. 281).A variety of options is needed to accomplish these tasks, including the individual's commitment to lifelong learning and self-advocacy skills.

It is important to realise that, as D'Andrea and Farrenkopf (2000) have pointed out, a variety of methods, for example, optical devices (magnifiers, monoculars), non-optical methods (changes in lighting, the use of bold line pen), synthesised speech, live readers, large print or audio-taped materials, can be used at different times to access visual information in the environment, just as they can be used for academic tasks (p. 7). It is also important that students with low vision have access to the full range of these methods together with the option (as necessary) of using Braille. It is also important that they develop an understanding of the appropriate use of the various aids in order to gain optimal access to literature at all times

Summary

Attaining and improving literacy is often, in the professional literature, considered a fundamental human right throughout life. Teachers, therefore, need to develop a 'mid-set' that promotes on-going involvement in their literacy programs. Koenig (1996) has provided the following principles to guide professionals in fostering the development of literacy in children and also in adults with low vision:

- Ensure that young children have a wealth of basic life experiences and direct access to early literacy events.

- Ensure that students develop academic literacy skills that permit reading with efficiency, stamina, comfort and enjoyment during the school years.

- Teach persons with low vision, multiple strategies for gaining independent and ready access to information.

- Ensure that persons with low vision develop functional literacy skills for completing daily tasks that are important for living and work.

- Address the unique needs of children and adults with adventitious vision impairment in establishing literacy by teaching them new approaches to reading with low vision.

- Address the needs of illiterate adults with acquired vision impairments by providing opportunities for literacy to be important and meaningful in their lives (p.66).

References

American Foundation for the Blind. (2004). *Improving literacy*. Retrieved 21 April, 2004 from www.afb.org/ Section.asp?SectionID=42&TopicID=182&DocumentID=2093 - 25k - 19 Apr 2004.

Anshell, R.J. (2000). *Kids, computers: Eyes and visual systems.* The RSI Network, 42. Retrieved 28 April, 2004 from http://www.tifaq.com/articles/kids&computers-jan00-jeffrey_anshel.html.

Barraga, N. C. (1970). *Teachers' guide for development of visual learning abilities and utilization of low vision*. Louisville, KY: American Printing House for the Blind.

Bell, J. K. (2004). *Integrating optical devices into literacy programs through the use* of *IEP goals and objectives*. Retrieved 22 April 2004 from: www.gettingintouchwithliteracy.org/ presentations/intopdev.html

Bush, B. (1990). The quest for literacy. *American Way*, p. 143.

Clay, M.M. (1991). *Becoming literate: The construction of inner control.* Portsmouth, NH: Heinemann Educational Books

Commonwealth Department of Education, Science and Training (1998). *Literacy for all: The challenge for Australian schools*. Retrieved 22 April 2004 from: www.dest.gov.au/schools/literacy&numeracy/ publications/lit4all.htm

Corn, A. (1986). Low vision and visual efficiency. In G.T. Scholl (Ed.). *Foundations of education for blind and visually handicapped children and youth* (pp. 96-117). New York: AFB Press.

Corn, A. L., & Koenig, A. J. (2002). Literacy instruction for students with low vision: A framework for delivery of instruction. *Journal of Visual Impairment and Blindness, 96*, 305-321

Corn, A.L. & Koenig, A.J. (Eds.) (1996). *Foundations of low vision: Clinical and functional.* New York; AFB Press

Corn, A. L., Wall, R., & Bell, J. (2001). Impact of optical devices on reading rates and expectations for visual functioning of school-age children and youths with low vision. *Visual Impairment Research, 2*, 33-41

Corn, A. L., Wall, R. S., Jose, R., Bell, J., Wilcox, K., & Perez, A. (2002). An initial study of reading and comprehension rates for students receiving optical devices. *Journal of Visual Impairment and Blindness, 96*, 322-334

D'Andrea, F. M. & Farrenkopf, C. (Eds.(. (2000). *Looking to learn: Promoting literature for students with low vision.* New York: AFB Press.

Gibson, L. (1989). *Literacy development in the early years: Through children's eyes.* New York: Teachers College Press

Hiebert, E.H. & Fisher, C.W. (1990). Whole language: Three themes for the future. *Educational Leadership, 47*, 62-64

Indiana Department of Education (1996). Functional literacy assessment guidelines for students who are blind or visually impaired. Retrieved 22 April 2004 from: http://ideanet.doe.state.in.us/exceptional/special/blind.html

Jolley, W., Gale, G., Gentle, F. & Steer, M. (2001*). Literacy and numeracy acquisition, including the role of Braille, for students in Australia who are blind or vision impaired. Report commissioned by the Commonwealth Department of Education, Training & Youth Affairs, Canberra, August.*

Koenig, A. J. (1996). The literacy of individuals.In Neuman, S. & Roskos, K. (Eds.)*. Language and literacy learning in the early years: An integrated approach.* Fort Worth, TX: Harcourt Brace Jovanovich

Koenig, A.J. (1992). A framework for understanding the literacy of individuals with visual impairment. *Journal of Visual Impairment & Blindness, 86,* 277-284.

Koenig, A.J., & Holbrook, M.C. (1995). *Learning media assessment of students with visual impairments.* 2nd ed. Austin, TX: Texas School for the Blind and Visually Impaired.

Latham, M. & Collins J. (2004). *Read Aloud Australia.* ALP News Statement, 31 January. Retrieved 28 April, 2004 from http://www.alp.org.au/media/0104/20006789.html.

Lowenfeld, B. (1973*). Psychological considerations.* In B. Lowenfeld (Ed.). The visually handicapped child in school (pp 27-66). New York: John day Company.

Rex, E.J., Koenig, A.J., Wormsley, D.P., & Baker, R.L. (1994). *Foundations of braille literacy.* New York: AFB Press

Stratton, J. M. (2004). Emergent literacy: A new perspective. Retrieved 22 April 2004 from: www.braille.org/papers/jvib0696/jvib9603.htm

Topor, I, Hall Lueck, A., & Smith, J. (2004). Compensatory instruction for academically oriented students with visual impairments. In A. Hall Lueck (Ed.). *Functional vision: A practitioner's guide to evaluation and intervention*. New York: AFB Press.

Van Krayenoord, C., Elkins, J., Palmer, C., Rickards, F., Colbert, P and others (2000). Literacy, numeracy and students with disabilities. *The Literature Review, 2*(1). Nathan, Qld. DETYA Clearinghouse.

Vision 2020. (2002). Australia's story: Facts and figures. Retrieved 27 April 2004 from: http://www.vision2020australia.org/australian_story/facts_figures.asp

Walker-Dalhouse, D. (1993). Beginning reading and the African-American child at risk. *Young Children, 49*(i), 24-28.