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Literacy Skills of Adults with Intellectual Disabilities in Two Community-Based Day Programs

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There is limited information available related to the literacy skills of adults with intellectual disabilities. In this project, information was collected about the contexts, current practices, and clients' abilities in literacy in two community-based disability service programs. Individual assessments were undertaken to collect details of the current literacy levels of adults with intellectual disabilities in day program settings. These assessments focused on receptive language, reading at the letter, word and sentence level, writing vocabulary and connected text, and literacy preferences. Audits were also conducted related to the provision of opportunities for clients accessing these services to engage with literacy including environmental print. Structured day program activities were observed to gather information about current literacy teaching and learning. Implications of the research findings and suggestions for provision of literacy education in these settings are discussed.

Introduction

Although individuals with intellectual disabilities progress more slowly across a range of learning tasks, it has been shown that they can continue to learn after the completion of their secondary schooling in the areas of reading (Browder & Xin, 1998; Pershey & Gilbert, 2002), mathematics (Ballard & Calhoun, 1991), and self-management (Browder & Minarovic, 2000). Browder and Minarovic illustrated the functional use of reading in competitive employment for adults with moderate intellectual disabilities who were considered to be non-readers. These adults were taught to read job-specific sight words and self-monitoring checklists and to be responsible for self-initiation of tasks across the workday.

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In the aspect of education that focuses on reading and writing, Fowler, Doherty, and Boynton (1995) suggested from their work that the adolescent to adult years may be the most appropriate time for individuals with intellectual disabilities to benefit from instruction. Several authors with data across these age ranges have shown that literacy skills do continue to develop into the adult years (Bochner, Outhred, & Pieterse, 2001; Moni & Jobling, 2001; Pershey & Gilbert, 2002). Bochner et al. (2001) noted that individuals with intellectual disabilities were able to achieve levels of literacy that were once regarded by educators as unachievable. In their study, these levels of achievement had been made possible through the application of on-going literacy education at school. In presenting a case study of a 35-year-old woman with Down syndrome who had received no formal education, Pershey and Gilbert (2002) showed that with use of an eclectic approach to instruction and contextually supported teaching of reading the woman learned to decode words, read sentences and short passages, and to spell in socially relevant and stimulating circumstances.

Moni and Jobling (2001) using socio-cultural approaches to literacy teaching and learning also showed significant progress within a group of individuals with Down syndrome aged 18 to 22 years across a 2-year program. Other studies to support positive literacy outcomes for individuals with intellectual disabilities have included both anecdotal reports (Anderson, 1995; O'Neal, 1991; Westby & Coslow, 1991) and research-based findings (Katims, 1991; Katims & Pierce, 1995; Pershey & Gilbert, 2002). Generally, it would seem that research data have shown that when adults with intellectual disabilities are provided with opportunities to broaden their literacy education through appropriate teaching and learning strategies they continue to develop and improve their language and literacy skills. However, adolescent and adult learning, especially literacy learning, is not often considered an option for individuals with moderate and higher support needs due to their intellectual disability (van Kraayenoord, Moni, Jobling, & Ziebarth, 2002). In secondary school and as part of their post-school options programs, the focus is often on social, vocational, and daily living skills to the exclusion of meaningful literacy (Hedrick, Katims, & Carr, 1999).

It has been suggested that teachers in schools have "tried to teach academic skills and had failed" and they have "watered down academic content of the curriculum in favour of an emphasis on daily living skills" (Jobling & Gunn, 1989, p. 17). This significant re-focus in curriculum content for schools, perhaps with its origins in the USA, was also seen by Farrell and Elkins (1994) who wrote

> It is somewhat to the shame of our teaching profession that most of the work done to date with children with Down syndrome has been initiated by devoted parents, usually in spite of the confident predictions from 'experts' that their children will be quite ineducable. (p. 271)

These writers considered that this misconception by educators that people with intellectual disabilities were unable to achieve in literacy beyond an elementary level had grown from assumptions based on research data of institutionalised

populations (Farrell & Elkins, 1994). Unfortunately for these learners, these attitudes persist even though it is some 30 years since deinstitutionalisation was implemented. Van Kraayenoord (1994) conducted a study of adult literacy and people with intellectual disabilities and found that literacy courses offered by Technical and Further Education (TAFE) colleges in Australia, the main provider of literacy instruction for this population, were typically not individualised and were designed to develop functional literacy. The individuals often repeated the courses and failed to "graduate" with competencies achieved by other learners in the courses.

Despite such negative findings related to literacy courses offered in the years beyond school to individuals with intellectual disabilities, a case for literacy as an aspect of further learning for individuals with intellectual disabilities can be developed. First, literacy skills enhance opportunities for vocational options and independent living and provide a sense of accomplishment, greater independence, and improved self-confidence in adults with intellectual disabilities (van Kraayenoord, 1994). Second, literacy skills are an integral part of life today (e.g., Department of Employment, Education, Training and Youth Affairs, 1998). Thirdly, literacy provides alternatives to the time spent in undirected activities usually in front of the television (see e.g., Hayden, Soulen, Schleien, & Tabourne, 1996; Sparrow & Sharp, 1991) and contributes to a richer quality of life.

As an aspect of learning, literacy should be promoted as a highly desirable life skill for individuals with intellectual disabilities but little is known about their literacy abilities and interests. This article reports on the literacy skills of adults with intellectual disabilities in two community-based day service programs. The data was collected as part of a larger Australian National Training Authority (ANTA) funded action research project that was undertaken to introduce and train support workers in these programs to facilitate the implementation of a literacy program based on socio-cultural approaches developed for the Latch-On program (Moni & Jobling, 2001). In this article the findings of the initial "Needs assessment" phase of the project is reported.

The aim of this phase of the ANTA project was to gather information about the literacy contexts and the literacy skills of the adults with intellectual disabilities in two community-based day service programs in Brisbane, Australia. This information would assist in planning an appropriate literacy program that staff in each day service program could implement. Information was gathered about the context of the literacy environment and an assessment of literacy skills was carried out on this sample. Detailed results have been reported elsewhere (see Moni, Jobling, & van Kraayenoord, 2002).

Participants

There were 11 females and 9 males aged between 18 and 23 years in the sample. All had a primary diagnosis of intellectual disability and several had additional physical and/or sensory disabilities and/or speech language disorders. They attended day programs located in bayside and southern suburbs of

Brisbane. They were individually assessed by the first author during February and April, 2002.

Instruments

The importance of using a range of tasks in a needs assessment has been emphasised by many authors (e.g., Westwood, 1997, 2001) and therefore a variety of both quantitative and qualitative information was collected. These instruments are described below.

Peabody Picture Vocabulary Test—Form IIIA (PPVT) (Dunn & Dunn, 1997)

The PPVT-IIIA is a test of listening comprehension for the spoken word and an achievement test of the person's receptive vocabulary acquisition in standard English. It is an individually administered, untimed, norm-referenced test designed for ages 2.5 to 90 + years. The results can be presented as a raw score (range 0 to 204); as a description using the terms extremely low, moderately low, low average, high average, moderately high, and extremely high; as an age equivalent score; and as a percentile rank indicating where the person scores in relation to others of the same age. The test is based on US norms.

Test for Reception of Grammar (2nd ed.) (TROG) (Bishop, 1989)

This is an individually administered, multiple-choice test designed to assess understanding of English grammatical contrasts, language structure, and language comprehension. A sentence is read orally and participants point to one of four pictures representing the content of the sentence. Four sentences are grouped into a block and a person must pass all four sentences to gain a pass rating for that block. The total number of blocks passed are summed and range from a minimum of 5 to 18 blocks. Block scores are equivalent to ages from below 4 to 11 years. The test has been standardised in Britain.

Neale Diagnostic Test—Letter Names and Sounds (Neale, 1999)

In this test letters of the alphabet are presented in random order, first in lower case and then in upper case. The participant is asked to provide individual letter names. Lower and upper case letters are presented again and the person is asked to provide letter sounds. Raw scores indicate the number of letters named and sounded out correctly.

Word Identification of Basic Sight Vocabulary (Gunn, Young, & van Kraayenoord, 1992b)

This test comprises 18 words that are common in books suitable for beginning

readers. The list consists of basic words found in all reading material, whether for adults or children.

Word Identification of Social or Protective Sight Vocabulary and Icons (Gunn, Young, & van Kraayenoord, 1992c, adapted)

This test comprises 18 words and 12 icons or frequently used graphic symbols which participants are likely to encounter or need to know in everyday life. It includes words such as "push," "bus stop," "poison," and "exit," and icons such as "male," "don't walk," and "no food or drink." The words are presented first in isolation to ascertain word identification skills without context and then with pictures as context cues. The icons are also presented in isolation without any words and participants are asked to name each one.

Literacy Interest Survey (Gunn, Young, & van Kraayenoord, 1992a)

The survey is designed to determine which texts participants preferred or would like to be able to read. The survey is a forced-choice questionnaire. The texts chosen are based on a consideration of opportunities for reading that may be presented to young people in their daily home, work, and community lives. Items range from texts for leisure reading such as books and magazines, to texts for functional reading such as recipes, the telephone directory, or instruction manuals.

Self-Selected Reading

Participants were asked to look through four reading selections from the Eyewitness Readers, Levels 1 to 4 (Dorling Kindersley Books, http://www.dk.com) and to choose a passage they could read out aloud to the first author. The Eyewitness Readers are described as high interest books with topics such as dinosaurs, fire fighting, and movies and consist of books with graded vocabulary, sentence, and grammatical structures. Participants were asked to read aloud passages of approximately 100 to 200 words from the chosen reading material. The oral reading was audiotaped and a running record was produced from the taped reading. An analysis of the reading was undertaken using *The Early Detection of Reading Difficulties* (Clay, 1979). From the running record miscues, including errors and self-corrections, and information about reading strategies were obtained. An easy text is read with 95 to 100% accuracy, an instructional text is read with 90 to 94% accuracy, while frustration is any text read with less than 85% accuracy.

Writing Samples

There were two tasks. In the first task, participants were asked to write a story on lined paper. Topics were usually suggested by the first author saying, for

example, "tell me about your pets, family, holiday, or weekend." Time allowed for writing was 10 min. An examination of writing behaviour on Task 1 was undertaken using the scoring system from Clay (1979). Scores from 1 to 4 indicated writing content was not yet satisfactory and scores from 5 to 6 indicated the writing was probably satisfactory for the three areas assessed, namely language level, message quality, and directional principles. The participants were also asked to write as many words as they could (Task 2) and were provided with examples of words (e.g., I, a, the, and) by the first author. The time allowed for the second task was 5 min.

Literacy Audits (Moni, Jobling, & van Kraayenoord, 2002)

Three audits were undertaken. The first was the Environmental Literacy Audit. Information was collected on a specially constructed pro forma about the text types, the number of text types, and information regarding accessibility, readability, and whether the text types were for staff members or clients. The second was the Classroom Activities Record during which observations were undertaken to record the type of activity, duration, location, the events that occurred during the activity, and the literacy practices observed. The third was the Observation of Clients' Engagement with Literacy. A record was made of the opportunities for individuals to engage with text, initiations by individuals to engage with text, interactions around text, attitudes towards text, and the nature of the interactions. The instruments comprising the Literacy Audits can be obtained from the second author.

Procedure

Participation was voluntary and the research was approved by an Ethics Committee within The University of Queensland. Participant assessments were undertaken during the regular day programs over two sessions, each lasting 40 to 80 min (a break was given if the session lasted more than 40 min). The audits were undertaken by the first author on the same visits as the assessment of the participants.

In session one, participants completed the PPVT-IIIA, Neale Letter Names and Sounds, the Word Identification Tests, and the Literacy Interest Survey. In session two the Test for Reception of Grammar and the self-selected reading were administrated and the writing samples collected.

Results

The results have been grouped into four sections. These are receptive oral language, reading, writing, and Literacy Audits.

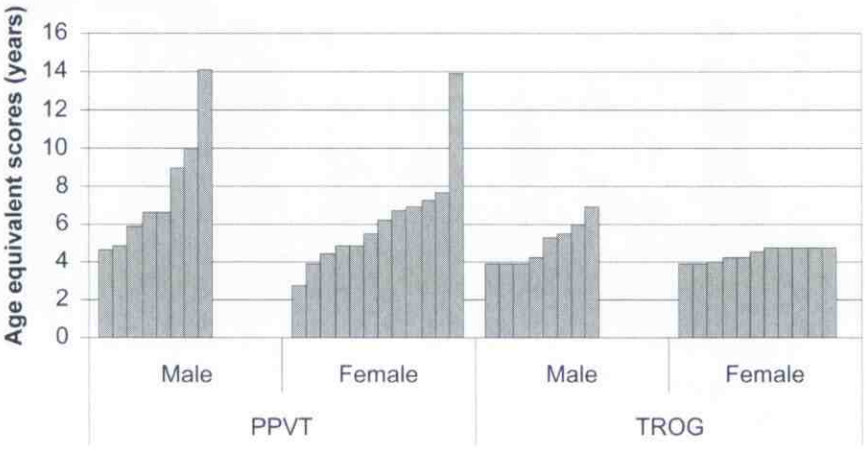

Figure 1. Receptive vocabulary and grammar

Receptive Oral Language

Raw scores for the PPVT–III ranged from 34 to 158, with median scores of 88 for males and 78 for females (see Figure 1). Age equivalent scores for males were from 4 years 7 months to 14 years 10 months, and for females from 2 years 9 months to 13 years 11 months. The median score for receptive vocabulary was equivalent to 6 years 5 months, with over 80% of age equivalent scores of between 5 and 14 years.

The raw scores on the TROG ranged from 1 to 14 with a median score of 8 for males and 7 for females (see Figure 1). One person did not complete the TROG test due to absence. Age equivalent scores were from below 4 years to 7 years for males and from below 4 years to 4 years 9 months for females. The median age equivalence was 4 years for receptive grammar and 50% of scores were equivalent to 4 years 6 months and older.

Reading

During the Neale Letter Names and Sounds, participants read the names of letters in the alphabet. Upper and lower case letter names read correctly ranged from 0 to 26. The median score was 24 for the upper case letters and 26 for the lower case letters. Eighty-eight percent of participants could recognise the names of over 70% of upper and lower case letters. Ninety percent of upper case letter names were known by 63% of males and 58% of females, while 67% of females and 63% of males knew all lower case letter names.

Participants said the sounds of the letters in the alphabet. Letters sounded out correctly ranged from 0 to 26, with a median score of 15 for upper case letters and a median score of 17 for lower case letters (see Figure 2). Forty percent of participants knew the sound of more than 70% of upper and lower case letters, while over 60% knew more than half of the letter sounds of the upper and lower case letters. For upper case letters 75% of females and 50%

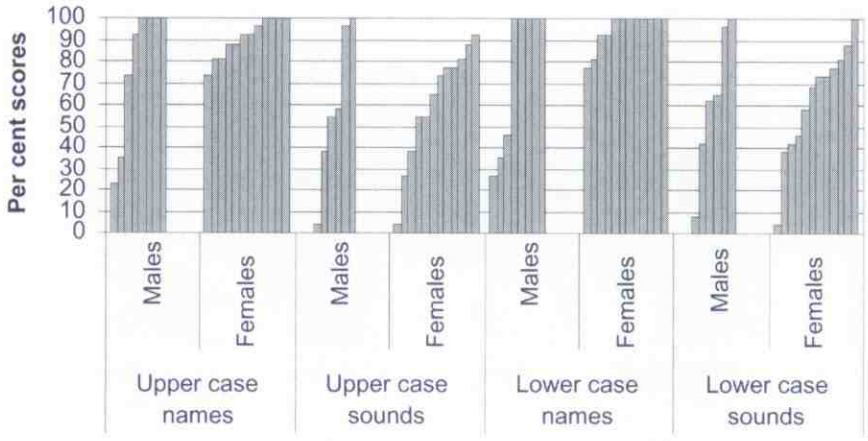

Figure 2. Participants' reading skills at the letter level

of males knew 15 or more upper case sounds. For lower case letters 67% of females and 50% of males knew 15 or more sounds. Two males had scores of zero for both upper and lower case letter sounds, but apart from these two participants there was a good knowledge of letter sound relationships.

The number of basic sight words read correctly on the Word Identification of Basic Sight Vocabulary ranged from 1 to 18 words with a median of 16 words read correctly (see Figure 3). Participants could read most sight words that are common to books for beginning readers. Fifty percent of males and 50% of females read 17 or 18 sight words correctly.

Responses of participants on the Word Identification of Social or Protective Sight Vocabulary and Icons ranged between 0 and 18 social sight words, with the median score for words presented in isolation being 9 words read correctly (see Figure 3). When pictures provided context cues participants identified a range of 1 to 18 words, with a median of 14 words read correctly. For the icons alone, participants identified between 0 and 12 icons, with a median score of

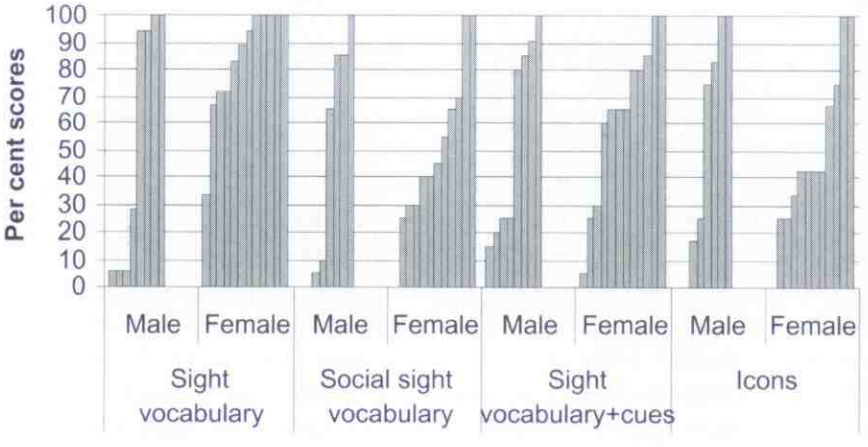

Figure 3. Sight vocabulary performance

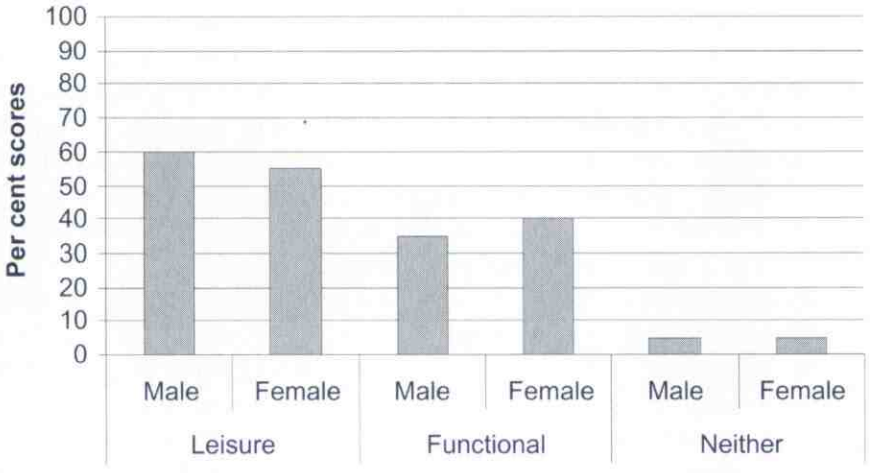

Figure 4. Literacy preferences

5 icons correctly identified. Thirty eight percent of males and 25% of females recognised 15 out of 20 social sight vocabulary items, but when pictorial cues were added 50% of both males and females recognised at least 15 social sight words. Pictorial cues aided recognition of sight vocabulary.

Literacy preferences as identified by the Literacy Interest Survey were organised into reading materials for leisure (want to read) and functional materials (need to read) (see Figure 4). Leisure text preferences included books, magazines, TV guide and functional text preferences included telephone directory, bus/train timetables, and grocery labels. Texts classified as leisure were preferred in 57% of cases, while functional texts were prefered in 38% of cases. No choice was made in 5% of cases for both genders. Leisure texts were preferred by males for 60% of choices and for females in 55% of choices. Functional texts were selected by males in 35% of choices and 40% choices for females. One female participant responded "neither" for more than one third of the responses. Thirty percent consistently nominated books as their preferred text type.

Self-Selected Reading

Eleven participants selected the Level 1 reader of the Eyewitness Readers (*Beginning to Read*, Dorling Kindersley Books, http://www.dk.com). One of the participants who read a Level One book could not be assessed accurately due to severe communication difficulties. The range of scores for accuracy was from 18% to 99%, with a median score of 75%. Oral reading rates ranged from 7 to 115 words per minute, with a median of 24 words per minute. Rates for errors ranged from 1% to 99%, with a median error rate of 25%, meaning one in four words was read incorrectly at this level of self-selected text.

Eight participants selected a Level 2 reader (*Beginning to Read Alone*, Dorling Kindersley Books, http://www.dk.com). Accuracy rates ranged from 6% to

94% with a median score of 58%. Oral reading rates ranged from 2 to 71 words read per minute, with a median of 12 words per minute. Rates for errors ranged from 6% to over 50%, with a median error rate of 54%, meaning nearly every second word was read incorrectly at this level of self-selected text.

One participant selected the Level 4 reader (*Proficient Reader Level*, Dorling Kindersley Books, http://www.dk.com). He read with 62% accuracy and with an error rate of 66%, indicating that one in three words was read correctly. Reading was at a rate of 44 words per minute.

Readers who scored over 90% for accuracy typically had chosen the Level 1 book. Most errors were either substitutions (48%) or refusals (42%). Participants self-corrected 3% of errors and requested help for 1% of errors. Omissions and the addition of words represented 2% and 4% of errors respectively. Over half the participants were reading at or below frustration level, but this was often because an inappropriate book was self-selected with participants choosing a book about a topic that interested them without considering the difficulty of the text. Overall results for reading at the letter, word, and sentence level indicated that most participants in this sample from the day service programs were reading at a level that is equivalent to students in Year 1 at school.

Writing

On the first writing task three participants wrote letters of the alphabet, two wrote single words, three wrote word groups, and two participants wrote one sentence. The remaining participants wrote between two and eight sentences with a median of two sentences. The writing samples were coded for language level, message quality, and directional principles (see Figure 5). The median performance indicated that participants wrote sentences, had the concept that a message was conveyed, and wrote with correct directional pattern and spaces between words. Writing content was not yet satisfactory for assessment of language level, message quality, and directional principles according to Clay's (1979) criteria.

Writing vocabulary obtained during the second writing task was counted and the number of correct words was compared with the stanine scores from Clay (1979). The number of words written independently ranged from 0 to 34 words with a median of 14 words. When compared with students in Year 1 and Year 2 at school the participants had a range of stanine scores from one to four, and the median stanine was between one and two. Most participants were writing at a level that was equivalent to early Year 1 at school.

Literacy Audits

There was a variety of text types in both community-based day service programs, for example, educational videos, office manuals, and educational CD-ROMs. Many of these were for staff use rather than client use.

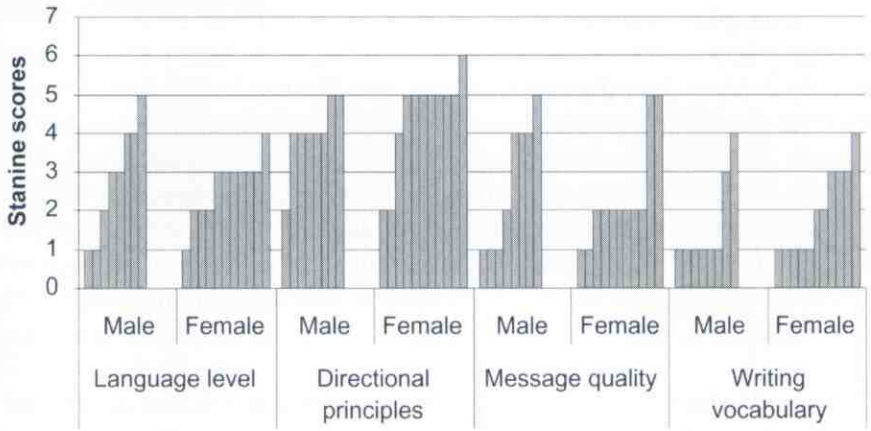

Figure 5. Writing

Literacy-specific observations undertaken in the day programs noted that a variety of literacy-related activities occurred. These included letter and word identification, identification of community, safety, and road signs, oral naming of kitchen implements, reading numbers on a computer screen and worksheets, reading from catalogues and magazines, writing of the person's name and date, and sequencing pictures and written text related to a task. Participants were usually passive recipients of activities because tasks were staff-generated and developed. Activities were often incongruent for the age or interests of the participants.

Detailed findings of the interactions during activities have been reported in Moni, Jobling, and van Kraayenoord (2002), but they are summarised here. Staff usually worked with participants individually or in small groups, but interactions were always between the staff member and one participant. Whenever the staff member was engaged with one participant the others in the group were usually off-task and not engaged in the literacy activity. Much of the interaction between staff and participants was verbal, with complex sentences and the use of questions which were usually closed requiring a "yes" or "no" response. Correct responses to questions were provided by the staff member when participants did not respond, rather than giving prompts to facilitate participants' successful answering. Generalised praise was given freely by members of staff.

Discussion and Implications of Findings for Literacy Instructions

The adults with intellectual disabilities attending the two community-based day service programs involved in this study demonstrated a range of emergent literacy skills. The assessments of the participants revealed variations in literacy abilities both across and within the participants. Their receptive oral language median score was equivalent to an age of 6 years 5 months. In reading, participants had median scores for letter knowledge and basic sight vocabulary

close to ceiling level, indicating good knowledge in these areas. It should be noted that when reading sentences from a self-selected text, some participants were at frustration level because the text was chosen for interest and not for ease of reading. Participants typically had knowledge of letter-sound correspondence and a well developed basic sight vocabulary. Participants were able to write word groups, had the concept of conveying a message, wrote with correct directional patterns, and used vocabulary that was equivalent to Year 1. These emergent literacy skills may be described as the foundations for developing literacy skills. Thus, the findings suggest that consideration needs to be given to offering adults continuing literacy instruction as part of their lifestyle options.

These adults had definite ideas about what they wanted to achieve in the area of literacy. The Literacy Interest Survey revealed the majority preferred to read leisure rather than functional literacy texts, with books and magazines dominating their preferences. Self-selected reading material was usually a book about a topic that interested them. Similarly to Moni and Jobling (2000), this study found that when writing tasks were on topics they were familiar with, for example, family members and friends, pets, and weekend activities, the participants were highly motivated to write.

These findings have implications for both the content of literacy programs, and the way in which such programs are organised. For example, while functional literacy is important, it should also be recognised that topics and texts need to be broadened to include the kinds of texts that the adults themselves are interested in and motivated to read. Teaching should also be centred around the needs and interests of the adults rather than limited to a pre-determined set of functional skills. The Classroom Activities Record and the Observation of Clients' Engagement with Literacy suggested that most interactions between support staff and participants were on a "one-to-one" basis and were prescriptive with much undirected and "off-task" behaviour. There was little evidence of participant input or ownership. However, the assessments of receptive language revealed that the achievements of these adults would place most of the participants' demonstrated literacy skills within the Year 1 to Year 2 levels of schooling. This suggests both that support staff need to understand this in terms of developing activities for their clients and also that they need to develop their own skills in adapting their communication with their clients during every day language and literacy activities.

It appears, however, that support staff may find changing these behaviours difficult as Bradshaw (2001) reported that an average of 45% of communicative acts were outside the reported understanding skills of individuals in the services. It also would seem that support staff relied heavily on verbal communication. However, in doing so there is a need for the staff to use simpler sentences and words, and open questions (McConkey, Morris, & Purcell, 1999). By adjusting the language level to the clients' levels of understanding, it may be found that those who seem unable to complete specified tasks can do so if they understand the language requirements (e.g., instruction and vocabu-

lary) of the tasks. Specifically, simple but relevant vocabulary that is not embedded in complex grammatical structures should be employed. Also it is necessary to provide more opportunities for clients to initiate topics and participate in conversational exchanges as equal partners.

From the Environmental Literacy Audit and the Classroom Activities Record the environments of the day programs were shown to be not conducive to the fostering of literacy, and support staff inadvertently hindered the acquisition of literacy skills. This is consistent with the observations of Hatton (1998) who also noted that communicative environments can inhibit the acquisition and display of practical language skills. Consequently there is a need to modify the environments to facilitate language- and literacy-related learning or, at the very least, to more effectively use the existing environments for creating opportunities for language and literacy growth.

Conclusion

Based on the results from the literacy assessments and the literacy audits undertaken in this study, a number of recommendations can be made related to the provision of literacy education in service settings. First, because adults with intellectual disabilities in day programs have many prerequisite literacy skills, opportunities to continue in relevant and appropriate literacy education should be provided. Second, literacy programs should continue to build on the strengths that the participants already have using teaching strategies that are based on interests, social contexts, and needs. Third, choice and the self-selection of literacy activities that are age-appropriate and built on participants' prior knowledge and interests are important to promote active engagement. Fourth, the environment for literacy activities should incorporate all the activities of day programming, and not just those related to specific survival or functional skills. The aim should be to arrange opportunities in which reading, writing, and oral language skills can develop through a range of enjoyable activities. Fifth, support staff need training to ensure that literacy programs and associated activities are developed to suit the profile of the client. Day service programs provide an ideal opportunity for building on the literacy skills of these adults.

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References

Anderson, N. (1995). No, Belinda set everything up ... quick. *Journal of the Queensland Society for Information Technology in Education*, *54*, 8–12.

Ballard, J. K., & Calhoun, M. L. (1991). Special Olympics: Opportunities to learn. *Teaching Exceptional Children, 24*(1), 20–23.

Bishop, D. (1989). *Test for Reception of Grammar* (2nd ed.). Oxford: Medical Research Council.

Bochner, S., Outhred, L., & Pieterse, M. (2001). A study of functional literacy skills in young adults with Down syndrome. *International Journal of Disability, Development and Education, 48*, 67–90.

Bradshaw, J. (2001). Complexity of staff communication and reported level of understanding skills in adults with intellectual disability. *Journal of Intellectual Disability Research, 45*, 233–243.

Browder, D. M., & Minarovic, T. J. (2000). Utilizing sight words in self-instruction training for employees with moderate mental retardation in competitive jobs. *Education and Training in Mental Retardation and Developmental Disabilities, 35*, 78–89.

Browder, D. M., & Xin, Y. P. (1998). A meta-analysis and review of sight word research and its implications for teaching functional reading to individuals with moderate and severe disabilities. *Journal of Special Education, 32*, 130–153.

Clay, M. (1979). *The early detection of reading difficulties* (2nd ed.). Auckland: Heinemann Educational Books.

Department of Employment, Education, Training and Youth Affairs (1998). *Literacy for all: The challenge for Australian schools.* Canberra: Author. Retrieved November 17, 2003, from http://www.detya.gov.au/archive/schools/literacy&numeracy/publications/lit4all.htm.

Dunn, L. M., & Dunn, L.M. (1997). *Peabody Picture Vocabulary Test Form IIIA.* Circle Pines, MN: American Guidance Service.

Farrell, M., & Elkins, J. (1991). Literacy and the adolescent with Down syndrome: International perspectives on research and program development. In C. J. Denholm (Ed.), *International perspectives on research and programme development* (pp. 15–26). Victoria, BC: University of Victoria.

Farrell, M., & Elkins, J. (1994). Literacy for all? The case of Down syndrome. *Journal of Reading, 38*, 270–280.

Gunn, P., Young, L., & van Kraayenoord, C. E. (1992a). *Literacy Interest Survey.* Brisbane: Fred and Eleanor Schonell Special Education Research Centre, The University of Queensland.

Gunn, P., Young, L., & van Kraayenoord, C. E. (1992b). *Word Identification of Basic Sight Vocabulary.* Brisbane: Fred and Eleanor Schonell Special Education Research Centre, The University of Queensland.

Gunn, P., Young, L., & van Kraayenoord, C. E. (1992c). *Word Identification of Social or Protective Sight Vocabulary and Icons.* Brisbane: Fred and Eleanor Schonell Special Education Research Centre, The University of Queensland.

Hatton, C. (1998). Pragmatic language skills in people with intellectual disabilities: A review. *Journal of Intellectual and Developmental Disability, 23*, 79–100.

Hayden, M. F., Soulen, T., Schleien, S. J., & Tabourne, C. E. S. (1996). A matched comparative study of the recreation integration of adults with mental retardation who moved into the community and those who remained at the institution. *Therapeutic Recreation Journal, 30*(1), 41–63.

Hedrick, W. B., Katims, D. S., & Carr, N. J. (1999). Implementing a multi-method multi-level literacy program for students with mild to moderate mental retardation. *Focus on Autism and Other Developmental Disabilities, 14*, 231–239.

Katims, D. S. (1991). Emergent literacy in early childhood special education: Curriculum and instruction. *Topics in Early Childhood Special Education, 11*, 69–84.

Katims, D. S., & Pierce, P. L. (1995). Literacy-rich environments and transitions of young children with special needs. *Topics in Early Childhood Special Education, 15*, 219–234.

McConkey, R., Morris, I., & Purcell, M. (1999). Communications between staff and adults

with intellectual disabilities in naturally occuring settings. *Journal of Intellectual Disability Research, 43*, 194–205.

Moni, K. B., & Jobling, A. (2001). Reading-related literacy learning of young adults with Down syndrome: Findings from a three year teaching and research program. *International Journal of Disability, Development and Education, 48*, 337–394.

Moni, K. B., Jobling, A., & van Kraayenoord, C. E. (2002). *Lifestories: An approach to teaching literacy to adults with intellectual disabilities. A training, teaching and resource package.* Canberra: Australian National Training Authority.

Neale, M. (1999). *Neale Diagnostic Test: Letter names and sounds.* Melbourne: Australian Council for Educational Research.

Numminen, H., Service, E., & Ruoppila, I. (2002). Working memory, intelligence and knowledge base in adult persons with intellectual disability. *Research in Developmental Disabilities, 23*, 105–118.

O'Neal, S. (1991). Leadership in the language arts: Dear principal, please let my special education child read and write. *Language Arts, 68*, 417–423.

Pershey, M. G., & Gilbert, T. W. (2002). Christine: A case study of literacy acquisition by an adult with developmental disabilities. *Mental Retardation, 40*, 219–234.

Sparrow, W. A., & Sharp, K. L. (1991). Activity patterns of community residential units in Victoria, Australia. *Australia and New Zealand Journal of Developmental Disabilities, 17*, 237–247.

van Kraayenoord, C.E. (Ed.) (1992). *A survey of adult literacy provision for people with intellectual disabilities: Volumes 1, 2 and 3. Report to the International Literacy Year Secretariat.* Brisbane: Schonell Special Education Research Centre, Queensland Division of Intellectual Disability Services and Division of Adult Education, Access and Equity (BEVFET).

van Kraayenoord, C. E. (1994). Literacy for adults with an intellectual disability in Australia. *Journal of Reading, 37*, 608–610.

van Kraayenoord, C. E., Moni, K. B., Jobling, A., & Ziebarth, K. (2002). Broadening approaches to literacy education for young adults with Down syndrome. In M. Cuskelly, A. Jobling, & S. Buckley (Eds.), *Down syndrome across the lifespan* (pp. 81–92). London: Whurr.

Westby, C. E., & Costlow, L. (1991). Implementing a whole language program in a special education class. *Topics in Language Disorders, 11*, 69–84.

Westwood, P. (1997). *Commonsense methods for children with special needs: Strategies for the regular classroom* (3rd ed.). London: Routledge.

Westwood, P. (2001). Assessment must lead to action. *Australian Journal of Learning Disabilities, 6*(2), 3–10.