

In the Eye of the Beholder:

Parent, teacher and researcher assessment in a study of precocious readers

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ABSTRACT

This article reports some of the findings of a study involving 11 New Zealand 4-year-old precocious readers (Margrain, 2005). The children, aged between 4:01 and 4:10¹, had reading ages three to nine years above their chronological age. Assessment of precocious reading abilities is discussed, including how assessment findings are influenced by the beliefs of the assessor, and choices of assessment tools. The study found that there were differences between the practices and beliefs of the researcher and parents compared to early childhood and new entrant teachers. This article provides recommendations for practice, relating to assessment practices and beliefs. These recommendations are pertinent to support working with precocious readers, but also more widely to other gifted learners.

Research Paper

Keywords

Assessment, early childhood education, gifted, parental attitudes, precocious readers, reading comprehension, teacher attitudes, teaching strategies.

INTRODUCTION/BACKGROUND

Precocious readers have been referred to as *young fluent readers* (Clark, 1982), *young early readers* (Stainthorp & Hughes, 1998, 1999) *young able readers* (Margrain 1998) and *precocious readers* (Jackson, 1988, 1992; Jackson & Biemiller, 1985; Jackson, Donaldson & Cleland, 1988; Jackson, Donaldson & Mills, 1993; Jackson & Kearney, 2005; Jackson & Lu, 1992; Jackson & Myers, 1982; Fletcher-Flinn & Thompson, 2000; Stainthorp & Hughes, 2004). Precocious readers can be identified because they 'have made substantial progress in reading comprehension before entering first grade', and their achievement is important because 'these children have had little or no exposure to standard reading instruction' (Jackson, Donaldson, & Cleland, 1988, p. 234). A striking feature of precocious readers is their ability to read very rapidly (Jackson & Klein, 1997; Jackson & Roller, 1993) with voracious appetites for reading (Anderson, Tollefson & Gilbert, 1985). Precocious reading is a *gifted behaviour* and the child demonstrates *gifted performance*. The performance perspective can, however, mean that children who have potential or ability, but who choose not to "perform" are not identified.

Stainthorp and Hughes (2004) define precocious readers as "children who are able to read fluently and with understanding at an unusually young age before attending school and without having received any direct instruction in reading. Precocious readers appear to have taught themselves to read" (p. 107). This means that precocious readers differ from early readers who have been formally taught by such methods as Doman word flashcards or reading kits. Parents and early childhood teachers of precocious readers may have used *informal* teaching support, for example reading to children, but without the express intention of teaching early reading.

Parents of precocious readers assert that precocious reading appears 'spontaneously' and is led by the child. Research by Thompson and Fletcher-Flinn (1993; Fletcher-Flinn & Thompson, 2000) points to induced or implicit understandings gained as a result of earlier book experiences. Jackson and Roller (1993) note, 'No formula for creating a precocious reader has been identified by researchers' (p. xviii). What has been consistently noted in the literature is that precocious readers play an active role in initiating and extending their literacy learning (Teale & Jeffries, 1982). According to Jackson and Roller (1993), 'the most sophisticated precocious readers are children who have driven their parents and teachers to keep up with them' (p. 32). Anbar (1986) affirms that children are the critical "success factors", with parents responding to their children's interest in reading rather than deliberately teaching. In Clark's (1982) study, parents repeatedly asserted that the children created the conditions for their own success; the children were insistent on reading activities, not the parents. Although formally "taught" early readers tend to even out by the age of 8 years (Hendy-Harris, 1990; Jackson & Klein, 1997), "naturally occurring" precocious readers appear to maintain their advantage (Durkin, 1966, 1976; Jackson, 1988; Jackson & Klein, 1997; Juel, 1991).

The main research question for the study was: *How are social scaffolding and self-scaffolding demonstrated within the learning of precocious readers?* Understanding the experience of *being* a precocious reader was as important to the study as data that identified reading level and strategies. Beliefs and practices of parents and teachers, and how they impacted on the children, were critical aspects of the study. Some of these findings are considered in this article, with specific reference to assessment.

¹ Four years, one month and four years, ten months of age.

METHOD

Participants and Recruitment

The study was conducted between 2000 and 2005, in children's homes, early childhood centres and new entrant classrooms. The 11 children attended 10 different early childhood centres, including 2 Montessori centres, 6 kindergartens and 2 centres that describe themselves as "private preschools". Four of the children continued within the study for several months after beginning school, each child attending a different school.

Children were recruited as a result of personal contacts within the early childhood education sector. Flyers inviting contact were also sent to local early childhood centres, kindergarten and playcentre associations, and home based early childhood education networks. It was estimated that these services have 3500 three to four-year-old children on their combined rolls. Flyers were also left at public libraries inviting contact. From this recruitment process, 16 children were referred to the study. While all 16 children could read beyond the age of 6 years, only 11 children were reading close to or beyond the age of 7 years, as assessed by the researcher, and these 11 children were all accepted into the study.

Instruments and Materials

Research methods included interviews with parents and teachers, observations of children's play, and standardised tests of reading. Research data was gathered from parents and teachers, as each of these groups are critically influential on young children's lives. Children's voices are also important, and have been reported within a separate article (Margrain, in press). Two of the reading tests used with children in the study were the *Neale Analysis of Reading* (Neale, 1999) and the *Burt Word Reading Test* (Gilmore, Croft & Reid, 1981). The *Neale* provides measures of reading accuracy, comprehension and fluency levels. The *Burt* test measures context free word reading abilities. Testing was generally conducted in the children's own homes, at times to suit the families. Other tests included the *Coloured Progressive Matrices* (Raven, Raven & Court, 1998), and the *British Picture Vocabulary Scale* (Dunn, Dunn, Whetton & Burley, 1997); although these test results are not discussed within this paper.

In addition to standardised testing, it was important that other activities occurred as part of the relationship between the children and researcher. This focus on building rapport was especially important given the children's young age. Some of the ways this occurred was when children showed me their bedrooms, toys, gardens, and photos, or drew me pictures and maps. Flexibility regarding test conditions was also important for this age group. For example, one child read to me while sitting inside a packing box. In most cases, I sat with the children on the floors of their homes while they read.

RESULTS

Results are reported within three sections, according to researcher, parent, and teacher perspectives. The three sections exemplify differences in assessment perspective among the groups.

Assessment Viewpoint One: Researcher

This section reports the results of two standardised reading tests with which children were assessed; the *Neale Analysis of Reading*, and the *Burt Word Reading Test*. The purpose of conducting these assessments related to eligibility for the study and also to learn more about the upper range of the children's reading ability, and their comprehension and fluency.

The children participating in this study all had reading ability levels well in advance of their chronological age. Reading accuracy levels on the *Neale Analysis of Reading* ranged from 6:08 age equivalency for a child aged 4:07, to 10:08 for a child aged 4:09. Results for four of the children are provided in Table 1 as an example of the range of test scores.

TABLE 1
Reading ability levels of four precocious readers

	Alistair	Erin	Henry	Julia
Age	4:08	4:07	4:09	4:01
Neale: Accuracy	8:01	8:10	10:08	7:05
Neale: Comprehension	6:11	7:02	8:03	6:04
Neale: Rate (fluency)	13:0	13:0+	12:02	12:03
Burt Word Reading Test	8:01-8:07	8:03-8:07	10:04-10:10	7:09-8:03

Henry read the following Level 5 passage from the *Neale Analysis of Reading* in 89 seconds, with 110 words read correctly out of the 117 total words. The seven errors are shown in bold, with the correct word in brackets afterward. Henry's reading of this passage illustrates his competency in reading; he had an accuracy rate of 94% on this passage (optimal instructional level according to Clay, 1993, is 90-94%). There were many words in the passage that are not usually able to be read competently by a 4-year-old, including: 'extraordinary', 'responsibilities', 'expeditions', 'knowledge', 'surroundings', 'illustrated', 'circular', 'apparently', 'territory' and 'subsequently'.

*Among animals the fox has no **rivval** (rival) for cunning. **Aspychus** (suspicious) of man, who is its only natural enemy, it will, when **purshowed** (pursued), perform extraordinary feats, even alighting on the backs of sheep to divert its scent. Parent foxes share the responsibilities of cub-rearing. Through their hunting expeditions they acquire an uncanny knowledge of their surroundings which they use (Repeated: 'which they use') in an emergency. This is well illustrated by the story of a hunted fox which led its **pusers** (pursuers) to a **negited** (neglected) mine-shaft enclosed by a circular hedge. It appeared to surmount the barrier. The hounds followed headlong, only to fall into the **indirectly** (accumulated) water below. The fox, however, apparently on **familiar** (familiar) territory, had skirted the hedge and subsequently escaped. (H: Test Results)*

Word reading levels on the *Burt Word Reading Test* were consistent with the reading accuracy levels on the *Neale Analysis of Reading*. For example, Gillian, aged 4:03, obtained a reading accuracy age of 6:10 on the first form on the *Neale*, and 6:11 on the parallel form of the *Neale* two weeks later. She completed the *Burt* between each form of the *Neale*, with an equivalent age band of 6:08 to 7:02 years.

Age-equivalent band scores on the *Burt Word Reading Test* ranged from 6:10 to 10:06 years of age. Examples of words that children could read from the *Burt* include: 'explorer', 'tongue', 'terror', 'emergency', 'overwhelmed', 'universal', 'encyclopaedia', 'trudging', 'destiny', 'urge', 'binocular' and 'economy'. When I asked Lewis (aged 4:08) if he knew any other words (as the manual directs) he carefully searched then said, 'Yes, New Zealand', pointing to the fine print 'New Zealand Council for Educational Research' at the foot of the form.

Comprehension was assessed using standardised questions within the *Neale Analysis of Reading*. Children's reading comprehension ranged between 6:03 and 8:03. Comprehension scores were slightly below the reading ability ages for the children, but were still well above their chronological age. For example, Erin, aged 4:07, had a reading accuracy level of 8:01 on the first version of the *Neale*, and a comprehension level of 7:01. Although her comprehension was a year below her reading ability, it was still 2½ years above her chronological age.

A key finding of the study was confirmation of the children's reading fluency, as measured by the *Neale Analysis of Reading*. Every child who participated in the study had a fluency rate well above their chronological age, and most of the children also had fluency rates well above their reading accuracy rates. For example, Isla had a chronological age of 4:09, a reading accuracy level of 7:07 on the *Neale*, and a fluency rate of 10:03.

Assessment Viewpoint Two: Parents

Parents were less concerned about *measuring* reading. They focused on *understanding and supporting* their children. Parents observed the way that children engaged with books, and the books that they read. However, despite their knowledge about their children, they often encountered negativity or disbelief when they described their children's ability, including from teachers and principals.

Parents affirmed that the children read with fervour, enthusiasm and delight. Many families referred to the children's 'love of reading' and 'devouring books'. Parents wanted me to clearly understand that reading was the *children's* interest, and not something that had been imposed from parents. They described children 'demanding' to be read to from a young age, their 'spontaneous' ability to read appearing around the age of three years, and their 'thirst' for reading and learning. Matthew's family, for example, were astonished when the pretext for *Star Wars* rolled onto the screen and he began to read them aloud, 'in a galaxy far, far away ...'; Matthew was aged three and had not seen *Star Wars* before.

She loves it, really enjoys it. By wanting to read, by doing it. We see her laughing in bed. (G: Parent interview, p. 9).

He enjoys it a heck of a lot. There is no way he'd do this much if he didn't enjoy it. It's just something he does. (A: Parent interview, p. 10)

Isla revealed she could read just before 3 years when she took a cereal packet out of the cupboard and began to perfectly read what was written on the side – I couldn't believe my ears. [The packet text] included the word 'fantastic'. (I: Parent interview)

All of the children had a plentiful supply of books in their home, and books were part of their lives from an early age. Parents regularly read to their children, provided books, visited the library and modelled reading. These behaviours indicate that parents were constantly informally assessing their children's interests and ability in reading. However, the parents in this study did not appear to do anything exceptional, or different to what many other parents also do.

We have a bookcase full of books we have been given – we're lucky. He likes 'fresh meat' so we also use the school library and [city] public library. (A: Parent interview, p. 8)

When he was interested in the solar system, I got him books and a poster for his room. (N: Parent interview, B5)

The variety of books that parents saw their 4-year-olds reading included storybooks, non-fiction, cookery books, school journals, dictionaries, telephone books, atlases, map books, maze and puzzle books. Henry's favourite book was *The house at Pooh Corner* by A. A. Milne.

Assessment Viewpoint Three: Teachers

In this section, feedback from early childhood teachers and new entrant school teachers are presented. Despite the differences in early childhood and school learning environments, there were some shared beliefs and expectations amongst teachers concerning age related expectations and perceived needs.

Perspectives of how a 4-year-old or 5-year-old "should" act repeatedly emerged within this study. Early childhood and new entrant teachers made several comments reinforcing chronological age rather than individual ability or potential capability levels, using statements such as, 'just a little 4-year old' (ECE teacher) or 'still a little boy' (new entrant teacher).

The focus on age-related expectations meant that some early childhood teachers were unaware of the children's reading abilities. Alistair had been at his early childhood centre for 6 months before the teachers realised he could read. Many other teachers, in both early childhood and school settings, knew of the children's reading abilities, but chose instead to focus on "normal, age-appropriate" behaviour. For example, a new entrant teacher said that she was not impressed by a child's reading ability when, 'he can't tie his shoe laces and he takes forever to eat his lunch'.

All of the new entrant school teachers were aware that the children could read well, but none of their testing had assessed the upper limits of the children's reading abilities.

The new entrant teachers expressed concern about the appropriateness of “allowing” children to read significantly in advance of their chronological age. Instead, they encouraged precocious readers to focus on ‘broadening out’, ‘settling in’, ‘being rounded’, ‘contributing’, ‘acting appropriately’ and ‘learning what is expected’ of them. Some precocious readers were observed to minimise their reading ability by pretending to practice early reading concepts such as one-to-one pointing to please their teachers and thus become assimilated with their age peers.

Some of the new entrant teachers focused on children’s difficulties rather than their strengths. One reason provided by teachers for why reading levels should be “held back” was so that the children ‘evened out’ or ‘caught up’ in other areas such as writing. The teachers expressed concern that the children might not understand reading material that was beyond their chronological age.

DISCUSSION

The selection of assessment tools influence assessment data, and are informed by expectations about learners. Within the study, tools were used that had sufficient challenge and a high enough ceiling that the children could show the range of their abilities. Because parents wanted to support their children with resources, they were interested to know the books and materials that their children most enjoyed, and were less concerned with reading “ages”. Teachers were interested in providing ‘help’ and support and they focused on areas in which the children were less advanced than they were at reading. However, because teachers had not assessed the children’s areas of strength to capacity, the teachers were unaware of the full extent of the children’s reading ability.

The comprehension data are important because many teachers have expressed their concern about “allowing” young children to read beyond their chronological age in case the children do not “really” understand what they are reading. The results from this study, however, clearly show that all of the children had comprehension levels well above their chronological age. They could read, understood what they read, and wanted to read. There is no evidence to explain why they should be “held back” or denied access to literature that at least matches their comprehension level, provided the content is socially suitable (Hartley, 1996). Julia, aged 4:01, was reading plays and novels in her free time. Her mother knew that her daughter had understood them because of the way she could discuss issues from the characters’ perspectives. If Julia had been restricted to age-level reading material, she would have had to wait another year before even being allowed to read emergent texts.

Another important consideration is the connection between assessment and programme provision. This study has illustrated that without appropriate assessment, it is more difficult to identify and provide for children’s learning. However, it would also be unsatisfactory if assessment and identification were thorough but there was no subsequent connection to support and programme differentiation for children.

Finally, assessment should not provide a justification for a deficit model of teaching. Rather than focusing on children’s “needs”, teaching can build from the credit models which view children as “ready, willing and able” to learn (Carr, 2001) and “rich in potential, strong, powerful, competent” (Malaguzzi, 1993, p. 10).

RECOMMENDATIONS FOR PRACTICE

- Be aware that children may come to early childhood centres and new entrant classrooms *already able to read*.
- Build on children’s strengths, interests and abilities rather than needs or problems.
- Include ecological assessments, for example interviewing parents and observing children’s strengths and interests.
- When consulting children and families about children’s abilities, ensure that they feel that it is safe to discuss giftedness.
- Indicators of precocious reading ability include fluency (rate or speed of reading) and children’s passionate engagement with reading material.
- Use assessment tools and approaches that have a sufficiently high ceiling that gifted children can show their potential.
- Don’t assume that young children cannot comprehend material at advanced levels.
- Remember that assessment results can vary – just because a child didn’t read a particular level to you on one day doesn’t mean that they can’t read it.
- Don’t expect that children need to have the same level of achievement in all areas in order to be considered gifted.
- Encourage diversity and celebrate difference. Avoid practices that encourage children to “dumb down”.
- Think about what “normal” means to you, your setting and community – is there room to challenge this and broaden your ideas?

CONCLUSION

Research studies, such as this one with precocious readers, provide an opportunity for reflection on what the findings mean for children, families and teachers. This study found differences between the assessment approaches and findings of the researcher, parents and teachers. The choice of assessment approach influenced what was discovered, and was influenced by prior expectations, values and beliefs. Effective practice should recognise and celebrate this diversity and acknowledge the limitations of any one approach. A consultative approach between teachers, parents and researchers can richly inform practice.

Focusing on strengths, abilities and interests is more powerful than a deficit view. The acceptance of diversity that is a tenet of special education must also be applied to assessing and teaching children with special abilities. Appreciation of diverse perspectives requires us to take off our blinkers and open the shutters so that we can appreciate the broadest vista possible.

REFERENCES

- Anbar, A. (1986). Reading acquisition of preschool children without systematic instruction. *Early Childhood Research Quarterly* 1(1), 69-83.
- Anderson, M., Tollefson, N., & Gilbert, E. (1985). Giftedness and reading: A cross-sectional view of differences in reading attitudes and behaviors. *Gifted Child Quarterly*, 29(4), 186-189.
- Carr, M. (2001). *Assessment in early childhood settings: Learning stories*. London: Paul Chapman.
- Clark, M. (1982). *Young fluent readers*. London: Heinemann.
- Clay, M. M. (1993). *An observation survey of early literacy achievement*. Auckland, New Zealand: Heinemann.
- Dunn, L. M., Dunn, L. M., Whetton, C., & Burley, J. (1997). *British Picture Vocabulary Scale* (2nd ed.). Windsor Berks., UK: NFER-Nelson.
- Durkin, D. (1966). *Children who read early: Two longitudinal studies*. New York: Teachers College Press.
- Durkin, D. (1976). A six year study of children who learned to read in school at the age of four. *Reading Research Quarterly*, 10(1), 9-61.
- Fletcher-Flinn, C. M., & Thompson, G. B. (2000). Learning to read with underdeveloped phonemic awareness but lexicalized phonological recoding: A case study of a 3-year-old. *Cognition*, 74, 177-208.
- Gilmore, A. M., Croft, A. C., & Reid, N. A. (1981). *The Burt Word Reading Test: New Zealand revision*. Wellington: New Zealand Council for Educational Research.
- Hendy-Harris, J. (1990). Young children who read fluently. In E. Richardson (Ed.), *Getting started: The proceedings of the NZ Council for Gifted Children*, 1(1).
- Hartley, M. (1996). Reading and literature. In D. McAlpine & R. Moltzen (Eds.), *Gifted and talented: New Zealand perspectives* (pp. 253-271). Palmerston North, New Zealand: ERDC Press, Massey University.
- Jackson, N. (1988). Precocious reading ability: What does it mean? *Gifted Child Quarterly*, 32(1), 200-204.
- Jackson, N. E. (1992). Precocious reading of English: Origins, structure, and predictive significance. In P. S. Klein & A. J. Tannenbaum (Eds.), *To be young and gifted* (pp. 171-203). Norwood, NJ: Ablex.
- Jackson, N. E., & Biemiller, A. J. (1985). Letter, word and text reading times of precocious and average readers. *Child Development*, 56(1), 196-206.
- Jackson, N. E., Donaldson, G., & Cleland, L. (1988). The structure of precocious reading. *Journal of Educational Psychology*, 80(2), 234-243.
- Jackson, N. E., Donaldson, G. W., & Mills, J. R. (1993). Components of reading skill in postkindergarten precocious readers and level-matched second graders. *Journal of Reading Behaviour*, 25(2), 181-208.
- Jackson, N., & Kearney, J. (2005). Achievement of precocious readers in middle childhood and young adulthood. Retrieved August 5, 2005, from www.geniusdenied.com/articles/ArticlePrintable.aspx?rid+10556.
- Jackson, N., & Klein, E. (1997). Gifted performance in young children. In N. Colangelo & G. Davis (Eds.), *Handbook of gifted education* (2nd ed., pp. 460-474). Needham Heights: Allyn & Bacon.
- Jackson, N., & Lu, W. (1992). Bilingual precocious readers of English. *Roeper Review*, 14(3), 115-119.
- Jackson, N. E., & Myers, M. G. (1982). Letter naming time, digit span, and precocious reading achievement. *Intelligence*, 6, 311-329.
- Jackson, N., & Roller, C. (1993). *Reading with young children*. Connecticut: The National Research Center on the Gifted and Talented, no. 9302.
- Juel, C. (1991). Beginning reading. In R. Barr, M. Kamil, P. Mosenthal, & P. Pearson (Eds.), *Handbook of reading research*. New York: Longman.
- Malaguzzi, L. (1993). History, ideas, and basic philosophy. In C. Edwards, L. Gandini, and G. Forman (Eds.), *The hundred languages of children: The Reggio Emilia approach to early childhood* (pp. 41-89). Norwood, NJ: Ablex.
- Margrain, V. (1998). *Young able readers: Parental perceptions regarding their children's literacy learning and transition to school; and Parent experiences of school collaboration and consultation*. Unpublished Master of Educational Psychology project: Massey University, New Zealand.
- Margrain, V. G. (2005). *Precocious readers: Case studies of spontaneous learning, self-regulation and social scaffolding in the early years*. Unpublished PhD in Education, Victoria University of Wellington, New Zealand.
- Margrain, V. G. (in press). Children's voices. *Tall Poppies*.
- Neale, M. D. (1999). *Neale Analysis of Reading* (3rd ed.). Melbourne, Australia: Australian Council for Educational Research.
- Raven, J., Raven, J. C., & Court, J. H. (1998) *Coloured Progressive Matrices*. Oxford: Oxford Psychologists Press.
- Stainthorp, R., & Hughes, D. (1998). Phonological sensitivity and reading: Evidence from precocious readers. *Journal of Research in Reading*, 21(1), 53-68.
- Stainthorp, R., & Hughes, D. (1999). *Learning from children who read at an early age*. London: Routledge.
- Stainthorp, R., & Hughes, D. (2004). An illustrative case study of precocious reading ability. *Gifted Child Quarterly*, 48(2), 107-120.
- Teale, W., & Jeffries, L. (1982). Reading in early childhood: A selected annotated bibliography. *The Exceptional Child*, 29(2), 127-136.
- Thompson, G. B., & Fletcher-Flinn, C. (1993). A theory of knowledge sources and procedures for reading acquisition. In G. Thompson, W. Tunmer & T. Nicholson (Eds.), *Reading acquisition processes* (pp. 20-73). Clevedon: Multilingual Matters Ltd.

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