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EDITORIAL

Welcome to the second issue of Special Education Perspectives for 2011. The two refereed papers in this issue address quite different issues: gender differences in oral reading fluency; and quality of life focus in curriculum development.

Limbrick, Madelaine and Wheldall, in the first paper, report on a study of oral reading fluency (ORF) for boys and girls in the middle years of primary school (grades 2-5). Contrary to common belief, the authors found that boys’ scores were not significantly different to those of girls, nor was there a significantly greater variability in those scores. A key implication of these findings for educators in inclusive classrooms is that girls and boys should both benefit from the same instruction.

Lyons and Cassebohm review the curriculum directions for students with profound intellectual and multiple disabilities (PIMD) and argue for the consideration of a life satisfaction matrix as a means of operationalizing a quality of life (QOL) focus in curriculum for this population of students.

Alchin, in the ‘Practically Speaking’ section of this issue, provides a succinct overview of some ways that digital learning resources can be designed to maximize access for all.

In this issue I have introduced a series which will appear from time to time in subsequent issues, ‘Positively Influencing’. I have asked some special educators to consider a paper that they read which made a difference to the way they think about special education. The first two papers are ones that influenced your two AASE journal editors, Associate Professor Michael Arthur-Kelly and myself, Dr David Paterson. We hope you enjoy this new section of Special Education Perspectives.

As practitioners in special education, I encourage your participation in future issues of this journal. Consider submitting a paper exploring your own practice or your own research and please feel free to contact me if you would like some guidance in the process.

Finally, a reminder that the next national conference of AASE, held in conjunction with the Tasmanian Principal’s Association (TPA) is to be held in Hobart, Tasmania, 11-13 July, 2012. The theme of the conference is ‘Ethical Leadership for All’ and the conference website is [http://www.gemsevents.com.au/aase2012](http://www.gemsevents.com.au/aase2012). I look forward to meeting as many of our readers as possible there.

David Paterson, Editor
Merran Pearson, Editorial Assistant
Special Education Perspectives
There is a common misconception that advances in technology automatically improve access for people with disabilities. However history is littered with examples that prove otherwise. The advent of the telephone disenfranchised the deaf community who were adept at Morse code and the telegraph. Just as nowadays poorly designed digital learning resources have far-reaching impact on student engagement, comprehension and therefore learning outcomes.

In many cases the problem lies with the use of paper based design rules in the creation of digital learning resources with little or no regard to the differences between how paper and digital devices display information and subsequent impact these differences have upon:

- How we interact with the content,
- Our efficiency in comprehending the content,
- Our capacity for sustained low effort interaction with the content.

Jakob Nielsen’s research has highlighted that by applying paper-based design rules to digital resources we decrease reading efficiency by as much as 20%! As such we are guilty of creating disabling resources. What follows are some of the default text-based digital design rules that you can easily implement to improve student engagement and comprehension.

- Page layout: landscape layouts fit the computer screen and cut down on scrolling.
- Font: San serif fonts such as Verdana have a higher readability quotient than serif fonts such as Times New Roman. One of the reasons is related to the height of the lowercase x which is taller.
- Font size: Increasing from 12pt to 14pt for paragraphs improves comprehension as it helps to compensate for the fact that computer screens display information at a lower resolution than paper.
- Line spacing: A spacing of 1.3 - 1.5 increases the whitespace between each line and improves readability.
• Characters per line: A maximum limit of 60 characters per line cuts down on readers getting lost moving from line to line.

• Paragraph justification: A left justification mirrors general reading behaviour and maintains consistent letter (kerning) and word spacing.

• Paragraph styles: Using clearly defined paragraph styles (eg: heading 1, heading 2, default, body) improves the document structure which improves comprehension as well as well embedding information which supports screen readers such as VoiceOver or Jaws.

BIBLIOGRAPHY
Refereed Papers

GENDER DIFFERENCES IN ORAL READING FLUENCY: ARE THERE IMPLICATIONS FOR IDENTIFYING LOW-PROGRESS READERS?

Lisa Limbrick, Alison Madelaine, Kevin Wheldall
Macquarie University Special Education Centre

ABSTRACT
Although there is a large body of research focusing on the importance of oral reading fluency (ORF), fewer studies have examined gender differences or variability of boys’ scores. The purpose of this study was to examine these issues. Approximately 210 students in Years 2 to 5 were assessed on the WARP and TOWRE at three points during the school year. There were no statistically significant gender differences in mean scores or variability on either measure. Boys and girls demonstrated almost identical rates of progress. It is concluded that gender is not a strong or consistent predictor of student performance on measures of ORF.

INTRODUCTION
Gender differences in reading has been a topic of research for decades (Wheldall & Limbrick, 2010). Many studies assert that more boys than girls are diagnosed with a reading disability (see, for example, Liederman, Kantrowitz, & Flannery, 2005) although evidence suggests that such findings are based on the extensive use of referred samples (Hawke, Wadsworth, Olson, & DeFries, 2007; Shaywitz, Shaywitz, Fletcher, & Escobar, 1990; Siegel & Smythe, 2005). Research employing population samples, on the other hand, have reported more moderate findings (Hawke et al., 2007; Limbrick, Wheldall, & Madelaine, 2010; Shaywitz et al., 1990; Wheldall & Limbrick, 2010), indicating that differences in reading ability between boys and girls are not as large as previously thought; gender differences are lower in population samples than those commonly reported in referred samples. Studies examining gender differences in reading have typically focused on reading comprehension, phonological awareness, and word recognition (Katusic, Colligan, Barbaresi, Schaid, & Jacobson, 2001; Rutter et al., 2004). Relatively few studies, however, have specifically examined gender differences in oral reading fluency (ORF).

ORF is defined as the ability to read effortlessly with speed and accuracy (Musti-Rao, Hawkins, & Barkley, 2009). It is a significant indicator of more general reading ability (Good & Kaminski, 2002), and is typically measured by Curriculum Based Measures of Reading (CBMs).
such as Passage Reading Tests (PRTs), which measure the number of words read correctly per minute (Logan & Petscher, 2010; Madelaine & Wheldall, 2005). Such measures are relatively quick and easy to administer, and can be used to identify low-progress readers (Wheldall & Madelaine, 2005). ORF has been found to correlate highly with reading comprehension, reading accuracy, and word attack skills (Madelaine & Wheldall, 1998). In recent decades a considerable amount of research has been conducted on ORF (Reschly, Busch, Betts, Deno, & Long, 2009; Wheldall & Madelaine, 2005), but only a small number of studies have examined ORF differences between boys and girls. Given the increasing interest in CBM as a means of identifying and monitoring the performance of low-progress readers, it is important to know whether there are real gender differences in performance especially with regard to differential variability in performance across gender.

GENDER DIFFERENCES IN ORF

Extensive literature searching conducted by the authors on a broad range of databases (including ERIC, Informaworld, Expanded Academic, SAGE, A+Education, Academic Search Premier, Journals@OVID and Google Scholar) revealed relatively few studies specifically examining gender differences in ORF. The majority of studies examining ORF do not appear to report gender, or analyse data by gender. From the limited number of studies available that do include gender, the findings are mixed. Several researchers have reported that girls score significantly higher than boys on measures of ORF. Madelaine and Wheldall (2002) examined gender differences on the Wheldall Assessment of Reading Passages (WARP), a measure of reading fluency. A sample of 1,011 students in Years 2 to 6 were required to read five WARP reading passages for one minute each, to calculate the average number of words read correctly per minute. Across the entire group, girls scored significantly higher than boys, reading approximately 14 words per minute more than boys, although this varied from 2 to 21 words per minute depending on Year (Grade). Wang, Porfeli, and Algozzine (2008) assessed 1,153 Year 2 students on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and found that girls obtained significantly higher scores than boys. Girls outperformed boys at three points of testing (Fall, Winter, and Spring) regardless of ethnicity (Asian, African American, Hispanic, and Caucasian) with the exception of Hispanic males in Fall and Caucasian males in Spring, who slightly outperformed girls. Others have also reported significant gender differences in favour of girls in ORF (Klein & Jimerson, 2005; Kranzler, Miller, & Jordan, 1999).

There is also some limited evidence to suggest that significant gender differences in ORF may be mediated by Grade or Year of schooling. Madelaine and Wheldall (2002), for example, reported that although girls achieved higher overall mean scores than boys across Years 2 to 6, these differences were statistically significant only in Years 4 and 5. Differences in Years 2, 3 and 6 were not statistically significant. Likewise, Klein and Jimerson (2005) examined a sample of approximately 4,000 students in Years 1 to 3 on the Oral Reading Assessment Level – by Jimerson (ORAL-J) and reported significant gender differences in ORF for one only cohort of students in Year 2. There were no significant gender differences in the other Year 2 cohorts, or in any of the Years 1 and 3 cohorts. Kranzler et al. (1999) reported a significant difference between boys and girls on a CMB of reading fluency, using random passages of approximately 250 words from graded textbooks. Students across Years 2 to 5 were required to read aloud for one minute to obtain a mean number of words read correctly per
minute. Significant gender differences were reported for Year 5, but not for Years 2, 3 or 4. Below, Skinner, Fearrington, and Sorrell (2010) found significant differences in the Fourth Grade, but not in other grades from Kindergarten to Fifth Grade.

Gender differences have also been reported in rates of progress for ORF, but again the findings are mixed. On the one hand, several studies have reported that girls made faster progress, or had a greater slope of growth, than boys. Wang et al. (2008) reported that monthly growth rates for girls were significantly higher than for boys. This was evident across three assessment points for Year 2 students. Gunn, Smolkowski, Biglan, Black, and Blair (2005) employed a sample of 299 students, referred on the basis of either reading deficits or behaviour problems. Across Kindergarten to Year 3, girls grew faster in ORF than boys. Students who were referred on the basis of reading deficits also grew faster than students referred for behavioural problems. As previous research indicates, though, boys are more likely to display external troublesome behaviour (Beaman, Wheldall, & Kemp, 2006), and it is possible that girls outperformed boys because they were more likely to be referred according to reading deficit criteria rather than behavioural criteria. This is unclear, however, as the percentage of boys referred for behavioural problems compared to reading problems was not reported.

By contrast, some researchers have reported that boys have higher growth rates, or steeper slopes, than girls. Kranzler et al. (1999) found that the slope for boys was “positive and substantial” while the slope for girls was “relatively flat and non significant” (p.337). This was only evident in Year 5; no significant gender differences were reported in slope for Years 2, 3, or 4.

More recently, Below et al. (2010) assessed 1,218 students across Kindergarten to Fifth Grade on the DIBELS, and reported that boys and girls made the same rates of progress in ORF.

Although a small number of studies have reported significant gender differences in ORF scores and/or growth rates, these results should be viewed with caution. Given that relatively few studies appear to examine whether there are differences between boys and girls, this raises the question of whether these studies are representative enough, or significant enough, to draw substantive conclusions. Indeed, although several studies reported significant gender differences, they also reported small effect sizes, indicating that gender differences may in fact be negligible. Gunn et al. (2005), for example, reported that girls grew significantly faster than boys, but also reported an effect size of 0.298. Similarly, Below et al. (2010) reported a very small effect size of .18. Small correlations between ORF and gender have also been reported. Pearce and Gayle (2008) reported a correlation of between 0.07 and 0.13, and indicated that gender accounted for only 1.4% of variance. Chard et al. (2008) reported correlations for gender and ORF between 0.01 and 0.08.

Other researchers have reported no significant differences between boys and girls at all. Siegel and Smythe (2005) assessed 984 students from Kindergarten to Year 5 on several measures of reading, and reported no statistically significant gender differences on word reading fluency for Years 2 to 5. Leppänen, Aunola, Niemi, and Nurmi (2008) reported no statistically significant differences between boys and girls on an ORF test, based on a sample of 158 children across Kindergarten to Year 4. Gender differences in reading comprehension, however, were statistically significant. Speece and Pericola Case (2001) classified students as having a reading disability using three classifications (CBM-Duel Discrepancy, IQ Reading
Achievement Discrepancy, and Low Achieving). CBM-Duel Discrepancy was a measure of reading fluency. They found that gender was not a significant factor in identifying students with a reading disability by any of the classifications. Others have also reported non-significant gender differences in ORF and/or rates of progress (Klein & Jimerson, 2005; Kranzler et al., 1999; Schwanenflugel et al., 2009).

To date, it appears that the existing literature on gender and ORF is somewhat conflicting. The main purpose of this study is to extend existing research by examining the performance of boys and girls across Years 2 to 5 on the Wheldall Assessment of Reading Passages (WARP), which measures ORF (described below). The WARP is a Passage Reading Test (PRT), where ORF is measured by the number of words read correctly per minute on a set passage of text. PRTs are increasingly being used for identifying and monitoring low-progress readers. One such method gaining widespread recognition in the identification of struggling students is Response-To-Instruction (RTI), which is a multi-tiered approach to the identification and instruction of students struggling with reading (Fuchs, Compton, Fuchs, Bryant, & Davis, 2008). If there are genuine gender differences in measures of ORF, then this would have implications for the use of RTI.

Furthermore, studies examining gender differences in measures of ORF have typically analysed mean scores, without focusing on the variability of mean scores. As will be discussed below, analysing both mean scores and variability can significantly effect the interpretation of results. This study is the first investigation where the variability of boys’ scores is incorporated when examining gender differences in ORF.

**DO BOYS HAVE GREATER VARIABILITY IN ORF SCORES?**

Of the few studies examining gender differences in ORF, differences reported relate primarily to differences in mean scores. What is not discussed, however, is whether the variability of scores for boys and girls differs in any way. In other words, do boys and girls differ in their distribution of ORF scores? As evidenced by research in other cognitive and educational domains, variability in scores can have a significant effect not only on the analysis and interpretation of gender differences, but also affect the gender ratios of students identified with reading difficulties.

Researchers have been investigating gender differences in cognitive abilities for more than a century (Ellis, 1984; Thorndike, 1914). It has been frequently reported that boys demonstrate greater variability in cognitive scores, including verbal, non-verbal and quantitative abilities (Lohman & Lakin, 2009). Conversely, girls tend to demonstrate smaller variability, with scores clustering closer to the mean (Lohman & Lakin, 2009). There is evidence to suggest that the greater variability in boys’ scores results in an over-representation of boys in the bottom of the distribution, resulting in more boys identified as having a learning disability (Deary, Thorpe, Wilson, Starr, & Whalley, 2003; Lohman & Lakin, 2009).

A growing body of evidence suggests that boys also have a greater variability in educational domains (Lohman & Lakin, 2009; Strand, Deary, & Smith, 2006), including reading. In a recent study, Hawke, Olson, Willcutt, Wadsworth, and DeFries (2009) demonstrated that although boys and girls had similar reading mean scores, boys had significantly greater variability in mean scores than girls. Hawke et al. concluded that a greater variability in mean scores can result in more boys scoring in the bottom of the distribution, which results in more boys...
being identified as low-progress readers. Other researchers have examined the variability of boys’ and girls’ reading scores by performance on large-scale assessments. Both Machin and Pekkarinen (2008) and Lynn and Mikk (2009) examined reading scores by gender on the Programme for International Student Assessment (PISA), an international assessment for 15-year-old students across approximately 40 countries. Both studies reported that girls obtained higher reading scores than boys, but boys’ demonstrated greater variability in reading scores than girls. This was a robust finding across most countries. According to Machin and Pekkarinen, in 35 countries, boys’ greater variance reached statistical significance (p<.05). They concluded that the greater variance in boys’ scores contributed to the larger preponderance of boys in the bottom of the distribution.

In Australia, Wheldall and Limbrick (2010) reported similar findings. They analysed student performance on the Basic Skills Test, a State-wide large-scale assessment, between the years 1997 and 2006. Across 10 years, girls consistently scored higher than boys, whereas boys demonstrated greater variability in reading scores than girls, and this was evident for both Year 3 and Year 5 students. Wheldall and Limbrick indicated that this variance may, in part, explain the higher prevalence of boys in the extreme end of the distribution.

As indicated by Lohman and Lakin (2009), researchers may reach very different conclusions depending on whether analysis is limited to only means, or whether both means and variability of scores are analysed. The implications regarding the variability of scores for boys and girls should not be underestimated.

In terms of ORF, although only a handful of researchers have directly or tangentially examined gender differences, the authors could not locate any studies examining gender differences in the variability of ORF scores and its effect on gender ratios for low-progress ORF. Given that gender differences in the variability of scores has been demonstrated to affect interpretation and outcomes in reading, there is clearly a gap in the available literature relating to ORF. As such, examining gender differences in ORF scores as well as variability in scores is important for educators and researchers alike, particularly when identifying low-progress readers. If it is shown that boys have greater variability in their scores, then more boys will score in the bottom of the distribution, irrespective of whether there are significant gender differences in mean ORF scores.

MEASURES OF ORF

One final consideration when gauging gender differences in ORF is the measure used to assess it. Across studies ORF is measured by a variety of assessments, including Dynamic Indicators of Basic Early Literacy Skills (DIBELS) (Below et al., 2010; Gunn et al., 2005; Pearce & Gayle, 2008; Riedel, 2007; Wang et al., 2008), the ORF Test (Onatsu, Nurmi, & Aunola, 1999), the Oral Reading Assessment Level – by Jimerson (ORAL-J) (Klein & Jimerson, 2005), CBM probes (Kranzler et al., 1999), and the Gray Oral Reading Test – Fourth Edition (GORT-4) (Berninger, Nielson, Abbott, Wijsman, & Raskind, 2008; Schwanenflugel et al., 2009). ORF assessments typically employ graded readers appropriate for each Year (Grade). Passages vary from year to year and as a result it becomes difficult to compare ORF over time and between groups (Gunn et al., 2005). Madelaine and Wheldall (2002) also point out the disadvantages of using graded readers, including variations in readability, familiarity with passages, and limited comprehension (if a passage is taken out of a larger story). The Wheldall Assessment of Reading Passages (WARP) overcomes...
some of these issues. The WARP is one of the few passage reading assessments which does not rely on graded readers. The WARP is not tied to a particular grade but is carefully written to allow progress to be tracked across school years. This allows student progress to be monitored and compared across time. The WARP is a curriculum-based measure of reading and has been shown to be highly correlated with the Neale Analysis of Reading Ability and the New South Wales Basic Skills Test, a large-scale assessment (replaced by the National Assessment Program – Literacy and Numeracy (NAPLAN) in 2008). Although Madelaine and Wheldall (2002) examined gender differences in WARP means by Year (Grade), they did not examine the variability of scores for boys and girls.

Despite the importance of ORF in reading ability, and its high correlation with reading comprehension (Madelaine & Wheldall, 1998), little is known about gender differences in ORF in terms of variability in scores. The purpose of this study is to fill a gap in the available research and examine ORF mean scores by gender, examine the variability of scores for boys and girls and its effect on gender ratios for poor reading, and examine rates of progress.

The Test of Word Reading Efficiency (TOWRE) will also be administered. The TOWRE is not a measure of ORF (it does not measure connected text) but it has been highly correlated to measures of ORF, such as the GORT. The TOWRE measures two important word reading skills, sight word reading and phonetic decoding, which are critical to reading success. It is different to other measures of ORF (which measure words read correctly per minute from a passage) because it measures the rate of single word reading and pseudoword reading.

In this study the research questions are:

1. Are there any significant differences in mean ORF scores between boys and girls?
2. Are there any significant differences between boys and girls in the variability of ORF scores?
3. Are there any gender differences in rates of progress for ORF?

METHOD

Participants
The participants in this study were 210 primary school students (112 boys, 98 girls) in Years 2 to 5 attending an independent primary school in the Sydney Metropolitan Area. The number of students in each Year (Grade) was as follows: 58 in Year 2 (29 boys, 29 girls); 48 in Year 3 (30 boys, 18 girls); 57 in Year 4 (30 boys, 27 girls); and 47 in Year 5 (23 boys, 24 girls). There were three classes in each Year (Grade). One class in each Year (Grade) was a high achieving class. The remaining classes contained students across a full range of reading ability. School and parental permission via consent forms were obtained for all students participating in the study.

Measures
Wheldall Assessment of Reading Passages (WARP) (Wheldall, 1996). The WARP is a curriculum-based measure of reading fluency, consisting of a series of 200 word passages. In this study three WARP passages were administered, each passage comprising an entire story (narrative). All passages are highly correlated with each other (Madelaine & Wheldall, 1998; Wheldall & Madelaine, 2000) and are set at the same level of difficulty. A WARP score specifies the number of words read correctly per minute. WARP passages have been shown to demonstrate high parallel forms reliability (0.94 to 0.96) and criterion validity (0.78 to 0.80) with reading accuracy.
Refereed paper: Gender differences in ORF

(see Wheldall & Madelaine, 2000).

Tests of Word Reading Efficiency (TOWRE) (Torgesen, Wagner, & Rashotte, 1999). The TOWRE is a measure of reading accuracy and reading fluency, containing subtests of phonetic decoding and sight words. The subtest of phonetic decoding involves students reading aloud a list of pronounceable decodable non-words for 45 seconds. This subtest assesses the ability to correctly decode words. The number of words correctly pronounced (raw score) is converted into a standard score for grade equivalence. A percentile rank is also calculated based on standard scores. The sight words subtest “assesses the ability to correctly identify real words out of context solely on the basis of visual appearance in print” (p.8). Students are asked to read aloud for 45 seconds. Raw scores are converted into standard scores and percentile ranks. The TOWRE can be used to monitor reading progress and identify struggling readers. The TOWRE has high test-retest reliability (ranging .83 to .96), consistently high reliability coefficients reaching or exceeding .90, and correlation coefficients between Sight Word efficacy and Phonetic Decoding efficiency between 0.77 and .96.

Procedures

The entire study ran for 20 weeks (approximately two school terms). During this time participants were assessed three times (February, May, July) on the WARP, TOWRE Sight Words and TOWRE Phonetic Decoding.

Three WARP passages were administered to each participant at each testing point. Participants read each passage for one minute. The number of words read correctly per minute was averaged over the three passages to obtain a single measure of the mean number of words read correctly per minute.

TOWRE subtests Phonetic Decoding and Sight Words were administered at each of the three testing points. Standard scores and Percentile Ranks were calculated at each testing point using raw scores for each participant.

All assessments were conducted by trained research officers.

Analysis

Given that the analyses of these data involve multiple family wise comparisons, it was decided to employ a more stringent alpha level (p<0.01) in lieu of a Bonferroni correction. (In the event, this proved to be largely academic since so few comparisons even approached statistical significance.)

RESULTS

Gender Differences in Mean ORF Scores

Table 1 presents means and standard deviations for WARP, TOWRE Sight Words and TOWRE Phonetic Decoding scores by gender and Year (Grade), across three testing points. The results of statistical significance testing are also presented. Table 2 provides the relevant effect sizes for these gender comparisons.

Although small differences across gender (in both directions) are apparent in the table, a series of t-tests showed that none of these differences was found to be statistically significant at the specified alpha level (p<0.01). This was true for all measures for all years at all three testing points. The table of effect sizes shows that any observed differences were, in fact, either insubstantial or only small, for the most part, with no pattern to the direction of these apparent gender differences. The only three exceptions to this were medium effect sizes (>0.5) which were in different directions (Year 3 WARP scores in July and Year 5 TOWRE Sight Words scores in May.
Table 1 *Means and Standard Deviations across three testing points, by grade and gender*

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<th>February</th>
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<td>(13.59)</td>
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<td>WARP (WPM)</td>
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<th>TOWRE PD</th>
<th>WARP (WPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>101.96</td>
<td>98.17</td>
<td>1.447</td>
</tr>
<tr>
<td></td>
<td>(8.08)</td>
<td>(9.95)</td>
<td>(9.73)</td>
</tr>
<tr>
<td></td>
<td>102.83</td>
<td>97.75</td>
<td>1.755</td>
</tr>
<tr>
<td></td>
<td>(9.73)</td>
<td>(10.09)</td>
<td>.086</td>
</tr>
<tr>
<td></td>
<td>108.17</td>
<td>102.00</td>
<td>2.175</td>
</tr>
<tr>
<td></td>
<td>(9.66)</td>
<td>(9.79)</td>
<td>.035</td>
</tr>
<tr>
<td></td>
<td>101.78</td>
<td>97.63</td>
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<tr>
<td></td>
<td>(13.59)</td>
<td>(15.08)</td>
<td>(12.93)</td>
</tr>
<tr>
<td></td>
<td>105.09</td>
<td>100.79</td>
<td>1.029</td>
</tr>
<tr>
<td></td>
<td>(12.93)</td>
<td>(15.51)</td>
<td>.309</td>
</tr>
<tr>
<td></td>
<td>106.57</td>
<td>104.21</td>
<td>.534</td>
</tr>
<tr>
<td></td>
<td>(15.07)</td>
<td>(15.16)</td>
<td>.596</td>
</tr>
<tr>
<td></td>
<td>157.81</td>
<td>146.56</td>
<td>1.080</td>
</tr>
<tr>
<td></td>
<td>(31.25)</td>
<td>(39.53)</td>
<td>(31.16)</td>
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<td></td>
<td>169.94</td>
<td>157.10</td>
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</tr>
<tr>
<td></td>
<td>(31.16)</td>
<td>(38.17)</td>
<td>(27.39)</td>
</tr>
<tr>
<td></td>
<td>171.93</td>
<td>164.86</td>
<td>.806</td>
</tr>
<tr>
<td></td>
<td>(27.39)</td>
<td>(32.38)</td>
<td>.424</td>
</tr>
</tbody>
</table>

SW: Sight Words; PD: Phonetic Decoding; WARP (Wheldall Assessment of Reading Passages)
* Significant at .01 level
and July). There was thus no supporting evidence from this study for the effect of gender on mean reading fluency scores.

**Gender Differences in Variability of ORF Scores**

The results of statistical significance testing (F tests) of differences in variability of scores across gender are shown in Table 3. The only statistically significant difference (at the specified alpha level) observed for any measure in any age group at any testing point was for TOWRE Phonetic Decoding for Year 3 students at the May testing point, indicating greater variability in the scores of boys. No other observed differences in variability were statistically significant. There is, then, only very limited evidence from this study for greater variability in scores for boys than for girls.

Table 2 *Effect Sizes for Gender Differences in Mean Scores for WARP, TOWRE Sight Words and TOWRE Phonetic Decoding, by Year*

<table>
<thead>
<tr>
<th></th>
<th>February</th>
<th>May</th>
<th>July</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SW</td>
<td>-0.31</td>
<td>-0.36</td>
<td>-0.44</td>
</tr>
<tr>
<td>PD</td>
<td>-0.38</td>
<td>-0.28</td>
<td>-0.41</td>
</tr>
<tr>
<td>WARP</td>
<td>-0.17</td>
<td>-0.25</td>
<td>-0.20</td>
</tr>
<tr>
<td><strong>Year 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SW</td>
<td>0.08</td>
<td>0.25</td>
<td>0.30</td>
</tr>
<tr>
<td>PD</td>
<td>-0.11</td>
<td>0.05</td>
<td>-0.08</td>
</tr>
<tr>
<td>WARP</td>
<td>0.28</td>
<td>0.42</td>
<td>0.50</td>
</tr>
<tr>
<td><strong>Year 4</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SW</td>
<td>0.00</td>
<td>0.06</td>
<td>0.17</td>
</tr>
<tr>
<td>PD</td>
<td>-0.06</td>
<td>0.01</td>
<td>-0.17</td>
</tr>
<tr>
<td>WARP</td>
<td>0.30</td>
<td>0.38</td>
<td>0.30</td>
</tr>
<tr>
<td><strong>Year 5</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SW</td>
<td>-0.42</td>
<td>-0.50</td>
<td>-0.61</td>
</tr>
<tr>
<td>PD</td>
<td>-0.32</td>
<td>-0.30</td>
<td>-0.16</td>
</tr>
<tr>
<td>WARP</td>
<td>-0.31</td>
<td>-0.37</td>
<td>-0.24</td>
</tr>
</tbody>
</table>

**Gains by Gender**

Figures 1 to 3 show gains made on the WARP, TOWRE Sight Words and TOWRE Phonetic Decoding for boys and girls by Year (Grade).

Across all Years (Grades), analyses of covariance of scores at the final testing point (covarying initial test scores) revealed that there were no statistically significant differences between boys and girls in gains made on the WARP (F=0.653, p=0.420), TOWRE Sight Words (F=0.302, p=0.583) or TOWRE Phonetic Decoding (F=0.136, p=0.713). Effect sizes (Partial Eta Squared) were .003, .001 and .001 respectively. Boys and girls made the same overall progress on all measures.
Table 3 Significance Tests of Gender Differences in Variability of Scores for WARP, TOWRE Sight Words and TOWRE Phonetic Decoding, by Year

<table>
<thead>
<tr>
<th></th>
<th>February</th>
<th>May</th>
<th>July</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>P</td>
<td>F</td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SW</td>
<td>.113</td>
<td>.738</td>
<td>.072</td>
</tr>
<tr>
<td>PD</td>
<td>2.112</td>
<td>.152</td>
<td>1.471</td>
</tr>
<tr>
<td>WARP</td>
<td>.221</td>
<td>.640</td>
<td>.115</td>
</tr>
<tr>
<td>Year 3</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>SW</td>
<td>.090</td>
<td>.766</td>
<td>2.430</td>
</tr>
<tr>
<td>PD</td>
<td>5.026</td>
<td>.030</td>
<td>8.584</td>
</tr>
<tr>
<td>WARP</td>
<td>.670</td>
<td>.417</td>
<td>.001</td>
</tr>
<tr>
<td>Year 4</td>
<td></td>
<td></td>
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<tr>
<td>SW</td>
<td>5.816</td>
<td>.019</td>
<td>3.227</td>
</tr>
<tr>
<td>PD</td>
<td>1.898</td>
<td>.174</td>
<td>1.058</td>
</tr>
<tr>
<td>WARP</td>
<td>1.173</td>
<td>.284</td>
<td>1.147</td>
</tr>
<tr>
<td>Year 5</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>SW</td>
<td>.284</td>
<td>.597</td>
<td>.022</td>
</tr>
<tr>
<td>PD</td>
<td>.060</td>
<td>.808</td>
<td>.471</td>
</tr>
<tr>
<td>WARP</td>
<td>2.229</td>
<td>.142</td>
<td>1.292</td>
</tr>
</tbody>
</table>

Gender Ratios for Low-Progress Readers
Given that there do not appear to be any studies documenting gender ratios for low-progress ORF, we attempted to examine the number of boys and girls in the bottom of the distribution by performance on the WARP and whether variability of boys’ scores affect gender ratios. Low-progress ORF scores were defined as scores in the bottom 25% of the distribution.

At the first test point (February), by performance on the WARP, there were 7 students in Year 2 (all girls) identified as having low-progress ORF scores; in Year 3 there was 1 girl identified; in Year 4 there were 2 girls; and in Year 5 there 11 students (6 boys, 5 girls). The number of overall students identified in the bottom 25% of the distribution reduced across testing points.

Similar numbers were found by performance on the TOWRE. At the first test point, the number of students identified in the bottom 25% for TOWRE Sight Words were 5 students (3 girls, 2 boys) for Year 2; 6 students (2 girls, 4 boys) for Year 3; 11 students (4 girls, 7 boys) for Year 4; and 8 students (6 girls, 2 boys) for Year 5. For TOWRE Phonetic Decoding, in the bottom 25% there were 11 students (5 girls, 6 boys) for Year 2; 9 students (3 girls, 6 boys) for Year 3; 13 students (6 girls, 7 boys) for Year 4; and 12 students (7 girls, 5 boys) for Year 5. Similar to the WARP, the number of students identified in the bottom 25% reduced across testing points. In terms of the variability of boys’ scores, the only statistically significant result was for Year 3 TOWRE Phonetic Decoding (May). There were twice as many boys as girls scoring...
Figure 1 *WARP Gains made over 20 weeks, by Year and Gender*

![WARP Gains by Year and Gender](image)

Figure 2 *TOWRE Sight Word Gains made over 20 weeks, by Year and Gender*

![TOWRE Sight Word Gains by Year and Gender](image)
in the bottom 25% at this testing point, indicating that more boys may have been identified as low-progress, in this instance at least, probably due to significantly greater variability of scores. Given the small number of students identified as low-progress on ORF as well as single word reading and pseudoword reading (due to small sample size as well as the school being high achieving), though, it was deemed not possible to generate gender ratios of low-progress ORF based on these numbers. The degree to which variability in scores influenced gender ratios in the bottom of the distribution could, therefore, not be clearly determined.

DISCUSSION
The purpose of this study was to identify whether there are gender differences in mean ORF, differences in the variability of scores between boys and girls, and/or differences in rates of progress across gender. Few studies have analysed whether there are differences between boys and girls in ORF, particularly rates of progress. Furthermore, this study is the first to examine the variability of scores by gender for ORF.

Boys and girls did not statistically differ in mean ORF (WARP), Sight Words (TOWRE) or Phonetic Decoding (TOWRE). Girls did not outperform boys on any of the measures, and this was evident across all years of schooling. This finding is consistent with existing research indicating that there are no significant gender differences in ORF.
(Kranzler et al., 1999; Leppänen et al., 2008; Siegel & Smythe, 2005). In terms of the variability of boys’ and girls’ scores, the results in this study provide only very limited support for existing literature indicating that boys demonstrate greater variability, resulting in more boys identified as poor readers (Deary et al., 2003; Hawke et al., 2009; Lohman & Lakin, 2009; Machin & Pekkarinen, 2008). On the WARP and TOWRE Sight Words, boys and girls did not significantly differ in variability. On TOWRE Phonetic Decoding, no differences were statistically significant with the exception of Year 3 boys in May (the second testing point), who demonstrated significantly greater variability than girls. In this instance there were twice as many boys than girls identified as low-progress (6 boys, 3 girls), which may be indicative of the significantly greater variability in boys’ scores. This is the only occurrence in this study, however, where boys’ greater variability could be seen to affect the number of boys identified as low-progress.

There are several possible reasons why these results are not entirely consistent with those previously reported. First, while it has been shown that boys and girls differ in variability in other aspects of reading, it is possible they do not differ in the variability of ORF scores. If this is the case, then it would be unlikely that the variability of boys’ scores is an influential factor in identifying the bottom 25% of the distribution, and subsequently identifying low-progress readers. Second, it is possible that boys do have greater variability in ORF scores than girls, as in other aspects of reading, but that the findings in this study were not statistically significant due to other factors, such as the relatively small sample size. It should be emphasized, however, that effect sizes were also very small, suggesting that any observed differences are minimal in importance.

Similarly, due to the small sample size, we were unable to examine whether there were more boys than girls in the bottom of the distribution. An initial analysis of the bottom 25% of the distribution for the WARP revealed too few students; in some instances, only 1 student was identified. Similar numbers were reported for TOWRE Sight Words and TOWRE Phonetic Decoding. Meaningful analysis of the bottom 25%, therefore, could not be conducted. As a result, gender ratios for low-progress readers (by performance on measures of ORF), could not be generated. Furthermore, the impact of the variability of scores could subsequently not be examined. Previous studies reporting gender ratios for low-progress readers have varied considerably, depending on a number of methodological factors including samples (referred versus population), methods for identification (discrepancy formulae, Response-to-Intervention, and low achievement models) and severity of selection (cut points) (see Limbrick et al., 2008). Using population samples, however, gender ratios for low-progress reading are not as large as previously thought (Siegel & Smythe, 2005). Given that there were no statistically significant gender differences in ORF scores, and only a single statistically significant gender difference in the variability of ORF scores, it could be argued, hypothetically at least, that gender ratios for low-progress readers would be relatively low.

In terms of the TOWRE, some studies have already examined the bottom of the distribution, with mixed results. Galletly, Knight, Dekkers, and Galletly (2009), for example, reported that there were more boys than girls in the bottom 10% of the distribution in Sight Words, but not in Phonetic Decoding. Conversely, Harlaar, Spinath, Dale, & Plomin (2005) reported that gender differences in the bottom 10% of the distribution for the TOWRE
Refereed paper: Gender differences in ORF

subtests were not statistically significant. In both studies, however, variability in the distribution of scores for boys and girls was not examined. Given the emergence of literature on the variability of boys’ scores in reading generally, this study identifies an area of research which remains largely unexplored but has important implications for identifying low-progress readers.

In this study, boys and girls made almost identical gains in ORF, as evidenced by non-significant differences in gains as well as extremely small effect sizes. While these findings support recent research by Below et al. (2010), in general, however, existing literature, albeit limited, is conflicted in terms of gender differences in rates of progress, or gains, in ORF. Some studies have reported that girls make faster gains (Gunn et al., 2005); others have found the reverse (Kranzler et al., 1999).

It is possible that a number of factors have contributed to the discrepant findings reported across studies examining gender differences in ORF. First, studies vary in terms of samples, Year (Grade) and assessments, which make direct comparisons complicated. While any conclusions drawn should be made with caution, the small effect sizes reported in this study would indicate that any observed differences between boys and girls in ORF are only very small. It is plausible, then, that with solid instruction, both boys and girls would make similar progress.

Second, given the limited number of studies available, publication bias, or non-reporting of non-significant results (Wallentin, 2009), should also be taken into consideration. As the majority of studies on ORF do not report gender, it raises the question of whether gender differences in these studies are not significant and therefore not reported, or whether another explanation is warranted. Based on the findings in this study, it would appear to be consistent with the former.

On a larger scale, the findings in this study are consistent with existing research on the relationship between gender and reading more generally, indicating that gender is not a strong or consistent predictor of reading ability (Chard et al., 2008; Gunn et al., 2005; Limbrick, Wheldall, & Madelaine, in-press; Pearce & Gayle, 2008), and that gender differences in reading are minimal (Siegel & Smythe, 2005; Smart, Prior, Sanson, & Oberklaid, 1999). Additionally, evidence suggests that boys and girls are more alike than different in a range of abilities, including reading (Hyde, 2005). Negligible gender differences in ORF, then, appear to be part of a larger phenomenon rather than an isolated event.

Previous studies employing population samples have consistently reported smaller differences between boys and girls, compared to those employing referred samples, on a range of reading abilities, including reading comprehension, phonemic awareness, and word recognition. This trend also extends to ORF, with implications for methods of identification such as RTI. It does not appear that gender is a predictive variable when assessing students who may be low-progress readers, and therefore all students, irrespective of gender, can be objectively identified.

Educational Implications

In this study, the observed differences between boys and girls in ORF scores were not statistically significant and, along with small effect sizes, indicate that these differences are negligible. Rates of progress were also similar for boys and girls. As a result, it could reasonably be assumed that boys and girls would benefit from the same instruction, irrespective of gender. Additionally, because ORF correlates with measures of reading comprehension, reading fluency measures could reasonably be used to identify low-progress readers. Indeed, there is growing interest in the
use of CBM in identifying and informing instruction for low-progress readers. Identifying low-progress readers, however, should be considered in the context of gender differences in the variability of ORF scores. It is commonly believed that more boys than girls are identified as having a reading disability (Badian, 1999; Liederman et al., 2005). This is particularly prevalent in referred samples (Prior, Samson, Smart, & Oberklaid, 1995; Shaywitz et al., 1990). Few studies, however, have examined the variability of scores for boys and girls. It has been previously demonstrated that although boys and girls may have similar reading scores, boys show greater variability in reading scores, which in turn leads to more boys being identified as low-progress readers (Hawke et al., 2009). Although the impact of boys’ variability in ORF scores on the bottom of the distribution could not be demonstrated in this study, and this area of research remains largely unexplored to date, educators and researchers should not preclude the importance of examining the variability of scores when identifying low-progress readers, particularly in light of existing research in reading generally.

LIMITATIONS OF THE STUDY
One major limitation of this study was the sample size. Because the numbers in the bottom 25% were so small (as a result of the small sample size and the fact that the school was high achieving, therefore even fewer students were scoring in the bottom of the distribution), we could not examine whether gender differences in the variance of scores influenced the number of boys in the bottom of the distribution. As a result, gender ratios for low-progress ORF could not be calculated. As there appear to be no studies available on gender ratios for low-progress ORF, further studies with larger sample sizes (and more schools) are warranted.

CONCLUSION
Gender differences in ORF has been a topic of research largely unexplored. Indeed, to date there do not appear to be any articles examining the variability of boys’ and girls’ scores for ORF, nor gender ratios for low-progress ORF. The findings in this study, therefore, offer a unique contribution to the body of existing research on ORF and gender.

We found there is little difference between boys and girls in mean ORF scores, and this was evident across all Years (Grades). Similarly, boys and girls did not statistically differ in the variability of ORF scores except for a single significant difference for Year 3 boys (May), providing very limited support to existing literature on the variability of boys’ scores. Furthermore, given the relatively small sample size, gender ratios for the bottom 25% of the distribution could not be generated. It remains unclear, then, whether variability in ORF scores may affect gender ratios for low-progress performance in ORF. Because emerging evidence suggests that boys’ greater variability in reading scores may be an explanation of why there more boys in the bottom of the distribution, and consequently more boys identified as low-progress readers (Hawke et al., 2009), future research in the variability of ORF scores would therefore be valuable.

Finally, although few studies have examined gender differences in ORF, it appears that gender does not have a large effect on ORF performance. Studies in other areas of reading have also reported that gender does not play a significant role. The findings in this study are consistent with Limbrick et al. (in press), concluding that gender is not a consistent or strong predictor of reading ability.
REFERENCES


DIBELS, reading comprehension, and vocabulary in urban first-grade students. *Reading Research Quarterly,* 42, 546-567. doi: 10.1598/RRQ.42.4.5


CURRICULUM DEVELOPMENT FOR STUDENTS WITH PROFOUND INTELLECTUAL AND MULTIPLE DISABILITIES: HOW ABOUT A QUALITY OF LIFE FOCUS?

Gordon Lyons and Michele Cassebohm
School of Education, University of Newcastle

ABSTRACT
The education of students with profound intellectual and multiple disabilities (PIMD) challenges practitioners, families and policy makers. These challenges have philosophical, ethical and moral dimensions and variously impact curriculum, assessment and pedagogy for these students. The imminent arrival of the Australian Curriculum throws a spotlight on education generally and curriculum development specifically for these students. This paper reviews the nature of education for students with PIMD as a context for putting forward (the improvement of) quality of life as a preferred focus for curriculum and program development. The authors argue that this focus is consistent with the tenets of inclusion, has an emerging evidence-base, and is facilitative for policy and practice development.

PREFACE
In Australia the terms severe intellectual disabilities and high support needs generally refer to a heterogeneous group of students with extensive additional needs. This paper focuses on those students with profound intellectual and multiple disabilities (PIMD) as identified by the International Association for the Scientific Study of Intellectual Disabilities, the leading professional body in the field. That is these students ‘...are individuals with such profound cognitive disabilities that no existing standardized tests are applicable… who often have profound neuromotor dysfunctions (and) sensory impairments... are a physically very vulnerable group of persons with a high dependence on personal assistance for everyday tasks, 24 hours a day...’ (IASSID, 2011). It is important to emphasise the distinction between persons with PIMD and others because much of the relatively limited extant literature is undifferentiated (Imray, 2011). PIMD is a heterogeneous classification but the profundity of these individuals’ intellectual disabilities and the complexity of their widely varying concomitant sensory disabilities set them apart from others. Indeed persons with PIMD are widely regarded as experiencing a very low quality of life (Lyons & Cassebohm, 2010).
INTRODUCTION

Students with PIMD find learning more difficult than others and consequently their teachers find them very difficult to teach (Bayliss, 2005; Foreman & Arthur-Kelly, 2005). Their education is often very different from that of others (Arthur-Kelly, Foreman, Bennett & Pascoe, 2008). The inherent challenges have philosophical, ethical and moral dimensions (Slee, 2011) and impact curriculum, assessment and pedagogy (Bayliss, 2005). The reasoning for people with PIMD to be educated is widely accepted (Stolk, 2011) whereas the nature of this education is historically contentious (Ware & Donnelly, 2004).

The Australian Curriculum will commence (at least in part) in 2013 (ACARA, 2011). This curriculum is for all Australian school students and prescribes what all need to learn including common educational goals, core learning areas defined by requisite knowledge, skills and understandings, general capabilities and cross-curriculum priorities. Each part has or will be put for public consultation. The imminent arrival of this curriculum throws a spotlight on the nature of education for students with PIMD. Although it is referred to as a common curriculum substantial concerns have been expressed over its suitability for and relevance to these students (AASE, 2011). According to the Australian Curriculum and Assessment Authority (ACARA) students with ‘special education needs’ will be granted ‘appropriate adjustments’ in terms of content and assessment. Students with a ‘significant intellectual disability’ unable to benefit from these adjustments will be provided with ‘additional curriculum content and achievement standards’ (ACARA, 2010). (At the time of writing ACARA had promulgated two ‘draft for discussion’ curriculum documents for students with special education needs.) Recent research and international initiatives suggest alternative foci for developing curriculum for students with PIMD (European Agency for Development in Special Needs Education, 2009; Ware & Donnelly, 2004). One is a quality of life focus.

THE DEVELOPMENT OF SCHOOL EDUCATION FOR AUSTRALIAN STUDENTS WITH PIMD

Prior to the 20th century education for people with PIMD was nonexistent. These people were widely disregarded as sub- or non-human (Lachs, 1986), incapable of participating in most activities of daily living and frequently subjected to infanticide and euthanasia (Hogg, 2007). During the first half of the 20th century and despite legislated compulsory schooling children with PIMD were generally committed to residential institutions (Konza, 2008) because they were classified as untrainable or custodial; fit for care but not for an education (Bray, Macarthur & Ballard, 1988). The expectations and engagement of most staff were very limited so much of the children’s day probably passed in a non-alert, bored or frustrated state leading to challenging behaviours (Foreman, Arthur-Kelly, Pascoe & Smyth King, 2004).

The second half of the 20th century saw the emergence of the international equity and rights movements (Foreman, 2011). The principles of normalisation, least restrictive environment and social role valorisation found increasing public support and led to the deinstitutionalisation, special education and integration movements (Konza, 2008). Public special schools for students with intellectual disabilities were opened alongside those previously established by government-supported charitable organisations. With increasing public and government expectations and professional acceptance of the principle that all children were educatable the prevailing care paradigm shifted to the education paradigm (Simmons & Bayliss, 2007).
In the 1960s progressive special educators introduced the ‘developmental’ curriculum model wherein students were instructed in skills matched to their mental age with the belief that learning would follow normal developmental pathways (Kontu & Pirttimaa, 2009). This model was primarily informed by early childhood education (which was far less developed than that typical to school education); was conceptually limited by the belief that individuals with PIMD would not develop cognitively beyond the early childhood stage (Nietupski, Hamre-Nietupski, Curtin & Kala, 1997); lacked authenticity because it prescribed learning which frequently lacked functionality (Stephenson, 2006); and was often age-inappropriate (Foster, 2010). During this period behaviour change for moderating challenging behaviours was overemphasized rather than teaching adaptive skills to facilitate better communication and engagement (Butterfield, Arthur & Sigafoos, 1995). Prior to this time pre- and in-service training for teachers of students with PIMD had been very limited (Nietupski et al., 1997) and the expertise of staff was more in providing care rather than teaching, but instructional techniques did become subject to increasing professional scrutiny. Most special education teachers were not offered any special education training and although many pedagogical practices were (are) generic the education of students with PIMD held (holds) unique challenges (Jones, 2010).

In the mid 1970s the ‘functional’ model of curriculum emerged (Roberts & Ridley, 2009) wherein the notion of ‘criterion for ultimate functioning’ guided the design of a core curriculum based on the development of authentic, functional knowledge and life skill sets for the home, school and community domains. This aimed to empower students to function as independently as possible in these environments (Nietupski et al., 1997). Emphases given to different elements of the core curriculum were negotiated with parents as part of an IEP development process (NSWDET, 2005; Roberts & Ridley, 2009). This model was widely supported for its practicality and authenticity (Resource Support Unit, 1991). Behaviour change interventions were still promoted but improving instructional techniques meant that more realistic outcomes were achieved. Around the same time professional recognition of the pedagogical demands of teaching these students led to increased training opportunities. Although knowledge about ABA techniques had become more accessible (Bray et al., 1988) there was too little emphasis on learning about students’ non-observable cognitive processes (Nietupski et al., 1997). The pedagogy around IEP design and implementation had though improved greatly with an increased recognition of the need to plan collaboratively and across the curriculum (Centre for Developmental Disability Studies, 2004). Although teachers using the functional model were achieving creditable learning outcomes generally (Browder & Cooper-Duffy, 2003) criticisms were emerging that this progress was at the expense of essential cognitive skill development (Jackson, 1993; Sabatino, Miller & Schmidt, 1981).

By the 1990s integration philosophy had gained precedence and so conceptualisations of functional skills shifted to fit in more with mainstream curriculum. This shift provided mainstream teachers with the opportunity to better understand the educational needs of students with PIMD and facilitate their integration into regular settings (Olley, 2005; Westwood & Graham, 2003). It also meant that special education teachers had to re-scaffold their functional curricula to align with the academic scaffold of mainstream curricula (Nietupski et al., 1997). IEPs still provided for the individualised
Refereed paper: A QOL curriculum for students with PIMD

needs of students with PIMD but these were mostly seen as ‘special education business’ by mainstream educators (Jones, 2010). This worked against the call for mainstream teachers to take collaborative responsibility (Ryndak, Moore, Orlando & Delano, 2008-9). With integration and ultimately inclusion taking philosophical precedence (Slee, 2011) and the emergence of a worldwide policy shift towards common inclusive curricula pressure was brought to special educators to share their specialised pedagogical knowledge (Foreman, 2011). Notwithstanding that best practice pedagogy for students with intellectual disabilities was widely viewed as ‘special education’ (Jones, 2010) a growing collaboration of professionals identified strong commonalities (Dixon & Verenikina, 2007; Killen, 2005). Another major change was a re-emphasis on communication, relationships and social skills development (Boyd, Seo, Ryndak & Fisher, 2005; Hewitt, 2009; Imray, Gazquez & Bond, 2010). Assessment, curriculum and pedagogy and intricately related (Nixon, 2010) so knowledge about assessment for students with PIMD is central to understanding their education (Browder, Spooner & Bingham, 2004). Special educators spearheaded the development of best practice curriculum-based assessment and programming (Arthur-Kelly, 2008). For students with PIMD all forms of assessment are critical to best practice and outcomes (Dowrick, 2002) as their individual learning needs are idiosyncratic and learning improvements relatively incremental (Bauder & Simmons, 2005; Hewitt, 2009).

Since 2000 discourses of inclusion have become the prevailing ideology impacting Australian students with PIMD (Arthur & Foreman, 2002; Bain & Lancaster, 2006) but given the diverse policies of individual jurisdictions the nature of their education varies widely. Australian students with PIMD are mostly educated in segregated special schools although some have placements in special and regular classes in regular schools (Konza, 2008). Different interest groups support different placement options (Dempsey, 2011) but these options are restricted if a potential enrolment involves unjustifiable hardship (Dempsey, 2003). National and state disability legislation (e.g. the 1992 Disability Discrimination Act & 2005 Disability Standards for Education) applies. In most cases Australian students with PIMD have a collaboratively negotiated IEP based on their additional educational needs (Dowrick, 2001; Roberts & Ridley, 2009) although for some younger students content is drawn more heavily from and scaffolded by State curriculum / syllabuses (Roberts & Ridley, 2009).

CONTEMPORARY SCHOOL EDUCATION FOR AUSTRALIAN STUDENTS WITH PIMD

Contemporary Australian government policy, as evidenced in the Australian Curriculum documents, is to teach all students using common inclusive curricula and assessment processes. This poses considerable challenges particularly for those involved in the education of students with PIMD (Dixon & Verenikina, 2007; Dempsey, 2011; Pepper, 2007; Roberts & Ridley, 2009). The recent focus on evidence-based and/or best practice pedagogy in school education has seen resurgence in professional interest in examining and improving pedagogy (Killen, 2005). It is widely acknowledged that teacher competency is the strongest variable effecting student learning. Stephenson (2006) for example argued that the central focus on intellectual quality in the NSW Quality Teaching model has clear relevance to the teaching of cognitive and communication skills to students with PIMD. Special education in Australia
(and internationally) already benefits from reasonable consensus on what constitutes good practice (Chalmers, Carter, Clayton & Hook, 1998; Stephenson & Carter, 2010). There is considerable corporate knowledge about what is needed to improve outcomes for students with disabilities generally (Arthur & Foreman, 2002; AASE, 2010) and a reasonable research base informing developments in inclusive policy and practice and the education of students with disabilities in Australia; much of which has relevance to students with PIMD.

Evidence-based practice for students with PIMD includes for example: a balance of behavioural and developmental strategies; explicit, systematic, data-based instruction and assessment; the use of augmentative and alternative communication technologies; collaborative approaches to student-centred educational planning; behaviour state assessment; ABA and Positive Behaviour Support; curriculum-based assessment and programming; inclusive school renewal; person-centred transition planning; flexible Government funding; appropriate professional development; and a curricula focus on communication and social skills development. These evidence-based practices are variously identified, described and explained in for example Bain and Lancaster (2006), Carroll, Forlin and Jobling (2003), Centre for Developmental Disability Studies (2004), Clarke, Worcester, Dunlap, Murray and Bradley-Klug (2002), Dowrick (2002), Foreman and Arthur-Kelly (2005), Hewitt (2009), Konza (2008), Loftus, Ware and Donnelly (2005), Munde, Vlaskamp, Ruijssenaars and Nakken (2011), Renzaglia and Dymond (2005), Roberts and Ridley (2009), and Stephenson (2006).

In Australia (as it is in many countries) diverse interpretations of the principles of inclusion and pertinent policy mean that educational policy and practice is similarly diverse. For students with PIMD evidence-based practice is not widely evident. A variety of restraints impact progress. These include for example: inadequate funding, staffing, teacher expertise, support services and collaboration; attitudinal barriers; the regular/special education ‘divide’; a changing socio-political climate; discordant curriculum pedagogy and assessment policy and practices; widely diverse educational needs; and inconsistent definition and funding. These restraints are variously described and explained by for example AASE (2010), Australian Teacher Education Association (2006), Bayliss (2005), Dempsey (2003), Dowrick (2002), Ferguson (2008), Forlin, Loreman, Sharma and Earle (2009), Konza (2008), NSW Disability Discrimination Legal Centre (2010), Public Schools Principals Forum (2009), Roberts and Ridley (2009), Sigafoos et al. (2010) and Slee (2008).

The nature of and place for special education for students with disabilities continues to be questioned; particularly in the context of the inclusion movement (Simmons & Bayliss, 2007; Slee, 2011; Smith, 2007). Their learning goals and intended educational outcomes are often so individual, and their post-school adult lives so different from those anticipated for most of their same-age peers due to their total lifelong dependence on their carers in all activities of daily living. It has been said that the nature of their education is in some ways fundamentally different from that of most other students (Lyons, 2003a). Although inclusion (in educational and other contexts) prevails as a widely supported principle the realities of diverse interpretations and shortages in human and financial resources mean that it remains an unlikely outcome for many. For most students with PIMD who are widely regarded as the most challenging to educate, inclusion seems an unlikely outcome.
FUTURE PATHWAYS FOR EDUCATING AUSTRALIAN STUDENTS WITH PIMD

Where is the education of Australian students with PIMD heading? The Australian Curriculum mandates an inclusive direction but there is a diversity of possible pathways. ACARA states that students with a ‘significant intellectual disability…will be provided with additional curriculum content and achievement standards’ (ACARA, 2010) but at the time of writing had promulgated only limited information. International precedents suggest diverse options including for example: the Scandinavian (Finnish) ‘full’ inclusion pathway (Karakoski, 2008; Saloviita, 2009); the American federal legislative pathway mandating placement in the ‘least restrictive (educational) environment’ with an appropriately funded IEP (Curcic, 2009); the ‘cascade of placement options’ pathway offered in Great Britain and Australia (Curcic, 2009); the ‘pre-curriculum’ pathway adopted in Great Britain where eligible students are provided with curricula ‘routes’ which precede the foundation levels of the national curriculum (Government of Britain, 2009; Imray, et al., 2010; Loftus, et al., 2005); to the emerging British ‘exclusion’ pathway wherein students attend ‘24/7’ residential schools with coordinated teaching/learning across ‘home’, school and community domains (McGill, Tennyson & Cooper, 2006). Another pathway is to focus curriculum (development) on improving individual quality of life.

Curriculum development focused on improving individual quality of life

A rationale for this focus is that the overarching goal of education should be to empower individuals to seek and experience a good or better quality of life (QOL) for themselves and others (Lyons, 2003b). Most curriculum documents (including the Australian Curriculum) commence with broad and overarching educational goals which make implicit and even explicit reference to improving present and future QOL. Note: QOL has been widely defined over the last 30 years as it has emerged as a prominent and respected field of social theory, research and practice (Schalock, 1996). Overall QOL is composed of objective QOL (akin to standard of living) and subjective QOL (composed of happiness and life satisfaction or subjective well-being (Lyons & Cassebohm, 2010). For the purpose of this paper Schalock’s definitions of (individual) QOL are representative. That is ‘...QOL is experienced when a person’s basic needs are met and he has opportunities to pursue and achieve goals’...and)... ‘QOL reflects a person’s desired conditions of living and health and wellness...’ (Schalock, 1996).

(For further reading on this complex phenomena / topic see e.g. Brdar, 2011; Lyons & Cassebohm, 2010; Schalock, 2010.) Most pertinently the Preamble to the 2008 Melbourne Declaration on Educational Goals for Young Australians states that ‘...Australia’s capacity to provide a high quality of life for all...’ is dependent upon the education it provides to young Australians (Ministerial Council on Education Employment Training and Youth Affairs, 2008). Governments and school systems are taking an increasing interest in teaching about wellbeing and happiness. (See e.g. Morris, 2010 and Smith, Reid & Jones, 2010).

QOL wellbeing and happiness are now regarded worldwide as guiding principles in the development of support services for adults with intellectual disabilities (Gomez, Verdugo, Arias & Arias, 2010; Vos, De Cock, Petry, Van Den Noorgate & Maes, 2010) and are widely used to guide the design of person-centred support plans for adults with PIMD (Schalock, 2010). An obvious incongruity exists when adults
support services for people with PIMD now generally adopt a QOL focus in service design and delivery whereas school education systems persist with alternative foci (Nakken, 1997).

To reasonably conceptualise a comparable and consistent QOL focus for the education of students with PIMD various questions need answers. These should at least include - What is ('good' and 'better') QOL for children and young people with PIMD? How can the QOL of children and young people with PIMD be improved? Does the prevailing international / Australian movement to educate students with PIMD within the scaffold of a common inclusive curriculum really empower them to experience a good/better QOL in the present and future? Is there a legitimate alternative/complementary focus for curriculum development that is consistent with the broader principles of inclusion and QOL? Lyons’ grounded theory of life satisfaction for children with PIMD (Lyons, 2003) and his Life Satisfaction Matrix (Lyons, 2005) are informative. Lyons posits that the core goal of education for students with PIMD should be to improve their continuing QOL by providing them with teaching/learning experiences which improve their ability to experience happiness, life satisfaction (or subjective wellbeing) and ultimately QOL (Lyons & Cassebohm, 2010). Lyons’ argument is not simplistically that schooling should be about having fun. He explains that schooling (and indeed continuing education) should be about learning the knowledge, skills and understandings which can empower these students to experience (improved) happiness, subjective wellbeing and subjective QOL.

There is wide ‘in principle’ support in the extant literature for a QOL curriculum focus for students with more severe intellectual disabilities generally (Shearer, 2010) and for students with PIMD specifically (Loftus et al., 2005; Ware & Donnelly, 2004) as well as practice precedents (Bayliss, 2005; Imray, Gazquez & Bond, 2010; Longhorn, 2002; Ware & Donnelly, 2004). Bayliss for example describes initiatives taken by a growing group of UK schools for students with PIMD to introduce curricula specifically focusing on the development of QOL. Imray, Gazquez and Bond (2010) similarly describe a curriculum for students with PIMD which has moved well away from the common curriculum model that otherwise prevails in Great Britain.

A QOL focus is one that embraces and reflects the needs, wants, interests and preferences of individual students, consequently leading to improvements in their individual QOL. Current research around family QOL suggests in turn that as the QOL of a child with PIMD improves so does that of their immediate family (Zuna, Summers, Turnbull, Hu & Xu, 2010). Notwithstanding that individuals with PIMD are unlikely to impact the QOL of the wider community (because of their lifelong dependency and very limited community engagement) improvements in their own QOL would clearly impact their significant others.

**LIFE SATISFACTION (SUBJECTIVE WELL-BEING) FOR CHILDREN WITH PIMD: A GROUNDED THEORY**

Lyons’ (2003b) research investigated the phenomenon of life satisfaction for children with PIMD. It also sought to inform a continuing research agenda into understanding how communication partners come to know these children, and to inform the development of the Life Satisfaction Matrix (Lyons, 2005) a procedure for improving the life satisfaction (and QOL) of persons with PIMD. The study was a qualitative one, adopting symbolic interaction as the guiding theory of inquiry and a grounded theory methodology. The participants consisted of 22 school...
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age children (12 with PIMD and 10 with high support needs) and 78 of their communication partners (parents, other family members, paid carers, teachers, teacher aides and other professionals.) Data was gathered from over 400 hours of participant observations and semi-structured interviews with communication partners in school, home and community settings, and a broad review of extant literature.

The nature of life satisfaction for these children was described and explained by a grounded theory, consisting of a storyline and 19 interrelated categories of concepts. The findings of the study were that: the life satisfaction of children with PIMD is discernible; there was strong evidence for the face validity of the Life Satisfaction Matrix and its four underlying principles; the research informed a continuing agenda investigating how communication partners come to know these children; and the study contributed towards the small body of research into life satisfaction and quality of life for persons with PIMD.

IMPROVING LIFE SATISFACTION FOR PEOPLE WITH PIMD: THE LIFE SATISFACTION MATRIX (LSM)

Four evidence-based principles underpin the LSM i.e. individuals with PIMD express their inner states through consistent behavioural repertoires; these behavioural repertoires can be discerned by familiar others and validated by an independent other; the routine daily activity preferences of individuals with PIMD can be determined from their affective behavioural repertoires; and their life satisfaction is improved when more time is spent on preferred activities and less time on non-preferred activities. This last principle underpins more recent research into ‘stretching’: a closely related strategy for enhancing enjoyment of preferred activities for people with PIMD as explained by Lyons, Cassebohm and Mundy-Taylor (in press).

Inherent in the LSM is a five-step general procedure for ascertaining and improving life satisfaction (subjective wellbeing and subjective QOL) for individuals with PIMD. This procedure, although now used by a growing number of carers of and service providers for adults with PIMD, could be readily adopted by teachers of students with PIMD for use in curriculum development in schools; and particularly for IEP development. It is compatible with many of the aforementioned evidence-based practices for students with PIMD.

First, two or more of the individual’s most familiar communication partners (usually the class teacher and/or teaching assistant, and a parent or other primary carer) independently annotate/record their interpretations of the individual’s affect profile i.e. the usual but often idiosyncratic range of observable behaviours used by the individual to express a range of preferences for engagement in familiar and usually regular daily activities. (In the case of preference and positive affect this is often but not always as typical as eye contact, smiling, ‘happy/contented’ vocalisations, discernible movements towards a person/object/activity or ‘excited’ repetitious movements. In the case of neutral preference this might be loss of eye contact / closed eyes, expiration of other positive affect, deteriorating behaviour state, ‘bored’ vocalisations etc. In the case of dis-preference and negative affect, this might be typical ‘withdrawal’ behaviours, grimacing and ‘unhappy’ vocalisations, discernible movements away from a person/object/activity, or stereotypical ‘agitated’ movements. It is preferred that the two or more communication partners are from independent settings (e.g. one from school and one from home)

Second, an affect profile is then
collaboratively negotiated i.e. the participating communication partners collaboratively ‘compare, contrast and consolidate’ their observations about the typical affect behaviours used by the student. Consensus here is usually commonplace although there is likely to be differences of view/opinion about what activities/experiences actually invoke these affect behaviours. (This though is not at issue at this point in the procedure.)

Third, these communication partners then identify a discrete set of activity periods/experiences that occur routinely in the person’s day; some preferred, some dispreferred, and some of neutral preference. These activities are then ranked from most to least preferred. (These might include e.g. bus travel time, morning toilet, (various parts of) morning circle’, morning tea time, particular free play activities, TV viewing/music time, peer learning periods, Intensive Interaction time, afternoon rest time etc. Clearly in longer activity periods a range of affect might be discernable, so activity periods/engagements can be ‘segmented’ to simplify their review. Preferably this set should be drawn from school-, community and home-based experiences to emphasise the very collaborative nature of the LSM.

Fourth, an independent other (usually a teaching colleague) uses the affect profile to observe and ascertain a third comparative view about the individual’s preferences for some of the chosen activities and other additional activities. When ascertained preference rankings coincide for aforementioned activities and are appropriately predictive for the other additional activities, the affect profile is validated as a very reasonable indicator of the individual’s internal state and preferences for these activities. (Note: It is the authors’ experience that this validation is usually ‘easy’ to ascertain and agree upon. This means that this step can often be very brief or based on a sample of activities / experiences only.)

Finally, in line with the fourth principle above, daily routines in school community and/or home settings can be reviewed and variously adjusted so that activity periods/experiences can be modified to enhance their preference ratings. This may mean changing their nature (usually following systematic task analysis) and/or duration - when appropriate. These modifications are often subtle and call for considered behavioural observation. A ‘similar’ activity period/experience (say e.g. bathing) in one setting often invokes a very different affect rating in another. Variables might be environmental, interpersonal and/or procedural but a systematic analysis of primary and dependent variables is necessary here.

Considerations of curriculum, assessment and pedagogy are obviously all important here. This work would be demanding of an experienced and trained teacher of students with PIMD (as it is of experienced and qualified residential support workers who work in similar ways with adults with PIMD.) The LSM (and this procedure) can contribute particularly towards the development of IEPs; but clearly changes here have implications for group instructional planning and scheduling. Modifications to the nature and duration of routine activities must be reviewed periodically with the intention to enhance any improvements to life satisfaction specifically and QOL generally. The nature of these modifications/changes and the identification of prerequisite and/or facilitative skills determine the evolving curriculum (and related pedagogy and assessment aspects) of the individual’s education. Shorter term teaching/learning objectives should focus more on ‘making a better day’ but this must be balanced against important longer term teaching/learning goals. The focus (at least in school settings) remains on learning (not ‘just’
care) but this learning aims more directly at the development of knowledge and skills which in turn facilitate more immediate and longer term enjoyment of life. This means teachers will (continue to) teach a diversity of developmental and functional skills which might find application only in the longer term. It also means that teachers will probably be more closely attuned to those activities and engagements which best motivate each student’s learning.

CURRICULUM DEVELOPMENT FOR STUDENTS WITH PIMD: A QOL FOCUS

A QOL focus for curriculum development for students with PIMD targets individual needs, wants, interests and preferences. Acting upon these will improve individual student life satisfaction, subjective wellbeing and QOL. Making changes to what is taught (and how this is taught and assessed) obviously requires the support of policy makers; particularly given the imminent arrival of the Australian Curriculum. Curriculum and IEP development for students with PIMD should already be collaborative processes but any shift to embrace a valid and authentic QOL focus mandates a fully collaborative approach. It is the authors’ view (like that of Slee, 2011) that the most facilitative milieu for this QOL focus to curriculum development might be in a regular comprehensive school milieu which can provide the best resources and options. A common or inclusive curriculum on the other hand may well struggle to respond to individual needs, wants, interests, preferences and strengths so would not be the most facilitative of QOL improvement.

CONCLUSION

The education of students with PIMD presents continuing challenges to practitioners, families and policy makers. The impending Australian Curriculum is an inclusive curriculum but shows limited capacity to address the particular educational needs of these students. Contemporary research and practice initiatives suggest alternative pathways for curriculum development so taking a QOL focus to curriculum (and thus IEP) development is an alternative supported by the authors. A QOL (improvement) focus is consistent with the tenets of inclusion and current evidence-based practice in services and care for adults with PIMD. It now has an emerging evidence base in education. It broadens and illuminates options for curriculum development practice at the individual, school and systemic levels. Hopefully ACARA’s ‘additional curriculum content and achievements standards’ for students with a ‘significant intellectual disability’ will at least embrace the principles of a QOL focus. One collective professional responsibility for special and regular educators is to keep up with research, policy and practice developments. With this in mind the authors encourage their peers and colleagues to consider the nature and potential worth of adopting a QOL focus towards curriculum development for students with profound intellectual and multiple disabilities and to proactively engage in providing ACARA with feedback on any promulgated draft curriculum documents.

REFERENCES


ACARA (Australian Curriculum Assessment and Reporting Authority) (2010). *ACARA’s response to the consultation feedback on the draft of the Australian Curriculum*. Sydney: Author.


Dowrick, M. K. (2001). Educators, parents, students and researchers: different voices but common agenda. Special Education Perspectives, 10(2), 24-36.


Jones, P. M. (2010). My peers have also been an inspiration to me: developing online learning opportunities to support teacher engagement with inclusive pedagogy for students with severe/profound intellectual developmental disabilities. *International Journal of Inclusive Education, 14*(7), 681-97.

Karakoski, J. (2008). *The reform of education for students with special educational needs in South Eastern Europe: Lessons and experiences from Finland’s bilateral support*. Finland: Ministry for Foreign Affairs of Finland.


Refereed paper: A QOL curriculum for students with PIMD of life of children and young people with profound and multiple learning difficulties.


NSW Disability Discrimination Legal Centre (Inc.) (2010). *Submission: Inquiry into provision of education to students with a disability or special needs*. Strawberry Hills NSW: Author.


through cognitive training? *The Journal of Special Education*, 15, 125-34.


Central category Doing enjoyable things: Life satisfaction for these children is primarily about doing enjoyable things. It’s about being engaged with people who, and in activities that, are needed, wanted, liked and/or preferred.

Main category Just like other children but personal: Life satisfaction is the same for all children, but for these children it is often expressed in very personal ways.

Subcategory Life satisfaction discourses: Life satisfaction doesn’t make sense for these children, but quality of life and happiness do.

Subcategory Disability discourses: Disability is understood in different ways. Unfamiliar others often only see disability in these children, and not how they are feeling, learning and growing.

Subcategory Childhood and adulthood: These children are developing. They have a future, but they live in the here and now.

Subcategory Individuality: These children are individuals, and have their own characters and expressions.

Main category Happiness and contentment: Life satisfaction is about feeling both happiness and contentment.

Subcategory Day-by-day: Happiness and contentment should be experienced daily, and life lived one day at a time.

Subcategory Just taking it all in: Contentment can be just taking it all in.

Subcategory Balance: Happiness and contentment is about personal balance.

Main category Comfort and wellbeing: Life satisfaction is about feeling both comfort and wellbeing.

Subcategory Physical health: relief from acute/chronic pain is prerequisite.

Subcategory Daily wellbeing: Just having a good day is valued.

Subcategory Belonging: Relationships are central.

Main category Favourite things: Life satisfaction is doing and having favourite things.

Subcategory Being with others: Is caring and sharing.

Subcategory Special things: Is doing special things with special people.

Subcategory Water play: Playing with water is freedom, fun and belonging.

Subcategory Fun: Is having a wicked sense of humour!
Positively Influencing

THE PAPER
Full reference for the paper, book, video, etc

THE EDUCATOR
Professional details for the educator including title/s, organisation/s, etc

THE INFLUENCE...
Brief description of the influence that the paper had on the educator

SERIES INTRODUCTION

PAPERS THAT INFLUENCED ME
A series in which some special educators are invited to share a paper that made a difference to their professional practice.

Educators can usually remember reading something that made a difference to the way they think or act in their professional practice. This is usually a source of some fundamental beliefs about education and could be something that we find ourselves quoting to others. Because sharing ideas about professional practice is the focus of *Special Education Perspectives* we thought it would be interesting to ask some educators to share influential things that they have read. It is not our intention to provide detailed summaries of these papers – if they sound interesting, you are encouraged to read them for yourself.
Positively Influencing

THE PAPER


THE EDUCATOR

Michael Arthur-Kelly, PhD Associate Professor in Special Education, The University of Newcastle, and editor of the *Australasian Journal of Special Education*.

THE INFLUENCE...

Over the years I have been involved in various aspects of special education but my teaching and later research experience connecting with people with multiple and severe disabilities is my first passion. In 1998 when I read this I was about to submit my PhD, a series of ten case studies of school aged students with complex needs, focused on their socio-communicative experiences at school.

This paper spoke to me and I read it many times: I still do! The authority and the wisdom of the authors made me question all that I believed about my interactions with people. Do we really allow self-determination or do we somehow tick boxes and kid ourselves? What does it mean to embrace the communication ability of a person who experiences major challenges to full participation? In our design of communication support programs is the implicit emphasis on us always leading without necessarily waiting for a response? (one of my worst tendencies, to be sure!).

When you consider that this was written at the time when data-based approaches were informing positive behaviour supports and preference assessments, this was a brave paper indeed. It spoke of humanity as the benchmark for all that we do as educators. Of course the supportive ecology surrounding a person with severe disability is critical but so is the dignity of risk they experience.

Why did this paper impress me? Simple to answer: the honesty. Brown, Guess and colleagues, themselves seminal leaders in the field, recognised that we still had a long way to go if we were to genuinely embrace, accept and empower people with what might be considered to be high support needs. In 2012, as we ponder inclusive curriculum for all learners, these same questions have to be asked: are we going through the motions and making a facade or are we starting with what a person gives us and hearing them? Over to you: enjoy a brilliant paper.
Positively Influencing

THE PAPER

THE EDUCATOR
David Paterson, PhD FACE. Senior Lecturer in Special Education and Educational Psychology, University of New England; editor of *Special Education Perspectives*.

THE INFLUENCE...

Before becoming a member of the academic staff at UNE I was a secondary teacher of English and history, a teacher of students with severe and multiple disabilities and a special education consultant. Some years ago I was working as a special education consultant when I took part in a professional learning program that explained the Strategies Program for Effective Learning and Thinking (SPELT). As part of the professional learning program we were required to read this paper as it formed an important part of the theoretical underpinning of SPELT.

This is a review paper, a summary and analysis of a significant amount of other research which then draws conclusions and proposes some directions for future research and practice. It addresses the improvement of student learning ability; the ways that students can be taught how to learn and how to be aware of and control their own learning. A conclusion of the authors is that “genuine improvement of academic aptitude is not likely to result from anything less than a thoughtful, systematic curriculum that complements direct training in learning strategies, and thereby ‘engineers’ the gradual evolution of and efficient executive controller.” (Derry & Murphy, 1986, p. 31). The paper describes the search for ways of teaching students how to become strategic and more effective learners in the context of the regular classroom, a search that has been going on for some time. The authors explain that it is possible to teach students how to be better learners but that this requires careful, explicit instruction in learning strategies and simultaneous attention to the systematic development of metacognitive skills.

Why did this paper impress me? Because as a special education consultant I could see many students who were failing to learn and who were highly dependent on the individual teacher, a dependence which is not sustainable in a typical multi-ability class and certainly not in the world beyond school. The recommendations of this paper made
sense to me but also challenged my understanding of the role of the teacher and the school and forced me to think about the broader purposes of schooling. When I decided to start this series of ‘Influential papers’ I thought about papers that I had read that had made a difference to the way I approach special education. This is one of them even though it’s not a paper that mentions special education at all. Instead, it considers an issue that is fundamental for all educators; the design of effective ways to develop the learning ability of all students. I think that it is exciting to know that while the same challenges still exist that existed when this paper was written, there is also a coherent program of research that shows us some ways to address those challenges.

Notes