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# School: social and academic issues; peer relationships



### Learning progress at school, especially literacy

We have completed six studies of the children's progress in reading. Two of these occurred at the Grade 2 and Grade 6 stage, with all of children in the project included. The other four were smaller studies of children who were having problems of one kind or another and these were aimed at increasing our understanding of why some children do not do well at school. In all of these studies we have looked at the relationships that exist between academic difficulties and behavioural difficulties. These frequently co-exist in the school-aged population.

#### *Reading Study 1 (Reading and spelling in Grade 1)*

Within a smaller study of 300 children selected from the total sample for an in-depth study of development from 3 to 7 years of age, we tested all children on intelligence, reading, letter knowledge, school readiness, temperament, and family factors, when they were in mid-to-late Grade 1. Predictors of reading ability in Grade 1 were the child's intellectual abilities, letter-sounding skills, auditory discrimination and blending, teacher rating of the child's academic skills, and the child's own rating of his/her cognitive competence. We could predict whether children were struggling readers or good readers with almost perfect accuracy on the basis of their scores on these language and intelligence factors.

There were 52 children who were slower-than-average to learn to read (approximately 22 per cent of the sample). Assessment of these struggling readers, showed that they tended to be of lower intelligence than normally reading children (although still in the average range) and that they were more likely to have a higher level of behaviour problems, especially attention deficits and hyperactivity. They were also children who had been more difficult to manage during the pre-school years.

We visited these children at home a little over a year later (most were in Grade 2), and measured their intelligence, their reading and spelling, and their knowledge of the sounds and shapes of language and print. This latter aspect included seeing what they could identify by sound, for instance, sounding out letters, or knowing if two words sounded the same or different (these are phonological skills). We suspected that the children who remained delayed in reading would have poorer knowledge of language in sound as well as in print, compared with those who were now progressing at a rate appropriate for their age.

When we assessed them in Grade 2, almost one-third of these children had 'caught up' or almost caught up, and were reading at an age-appropriate level. However the other two-thirds were still behind. Those who had caught up were likely to have better knowledge of language as shown in their ability to sound out the letters of the alphabet, just as we had predicted. Those who were still struggling tended not to have well-developed phonological skills to help with reading of new words. They were also more

likely to have behaviour problems such as inattention and disruptiveness in the classroom, which may have hindered them from successful learning. They tended to show more difficult temperament characteristics, and teachers had rated them as having poorer language skills, and as being less 'ready' for school. Half of the 52 problem readers from this Grade 1 study were included in our Grade 6 assessment (see Study 4 below), and 70 per cent of them were found to be still below-average in reading.

This study highlighted the influence of early behaviour problems and of phonological skill acquisition in the early stages of learning to read. For many children with these early difficulties it was very difficult to 'catch up'.

### **Reading Study 2**

The second reading study was carried out using the survey method with the larger sample.

With parents' permission, we asked all the teachers of the project children when they were in Grade 2 to report on progress at school and on their behavioural adjustment, and to give each child a brief reading test. In this test the children had to pick out from a list of three alternatives the word closest in meaning to the target word they had to read, for example, tale (end-story-sleep); paddock (fence-sheep-field). Some 1205 teachers (almost 75 per cent of those asked) sent in the reading test data. Table 3 shows the range of reading skills among our children at 7–8 years of age.

The average number of correct answers for the whole sample of Grade 2 children was 14 out of a possible 20. However 16 per cent of the sample (or about four children in every classroom in the average school population) could only recognise 8 words or less; that is, they were very much behind in their reading (see Table 3). The average for this 'reading disabled' (RD) group was 4.9 words correct out of 20. Almost three per cent of

<b>Table 3 Reading achievement at 7–8 years of age</b>				
<b>Reading Score</b>	<b>Number of children with this score</b>	<b>Percentage of children with this score</b>	<b>BOYS percentage</b>	<b>GIRLS percentage</b>
0	29	2.4	66	34
1	10	0.8	50	50
2	4	0.3	25	75
3	12	1.0	50	50
4	14	1.1	64	36
5	25	2.0	60	40
6	23	1.9	48	52
7	38	3.1	50	50
8	52	4.3	63	37
9	47	3.9	50	50
10	67	5.5	66	34
11	78	6.4	54	46
12	47	3.9	53	47
13	67	5.5	52	48
14	78	6.4	55	45
15	94	7.7	50	50
16	116	9.5	47	53
17	146	12.0	56	44
18	139	11.4	50	50
19	136	11.1	40	60
20	82	6.7	43	57

*Source: Australian Temperament Project 1983–2000.*

project children could not read any words at all. Teacher ratings showed that the RD children were poorer on a range of specific academic skills (reading, spelling, writing, and maths), on language development, and on overall progress in learning. Of the RD children, 56 per cent were boys and 44 per cent were girls, so there was just a slight (non-significant) preponderance of boys. Among the best readers (19 or 20 words correct), significantly more were girls (59 per cent versus 41 per cent).

Forty per cent of the RD boys, and 15 per cent of the RD girls, also had behaviour problems. These were of many kinds but were more likely to be hyperactivity, attention difficulties, and conduct problems. Hence there was a strong association between failing to learn to read at a normal rate, and having behaviour problems, especially for boys.

All of our work in the project has shown that having behaviour problems in the years just preceding school entry and continuing on into the first few years at school is a powerful risk factor for the development of learning difficulties, especially in boys. Girls are at much less risk for this association with behaviour problems, even if they are slow to learn to read. In addition, we, like many others, have confirmed that progress in reading can be greatly helped if children have some knowledge of letters, and a good vocabulary when they begin to learn to read; and if parents themselves are interested and encouraging about reading with their children.

### *Reading Study 3*

Our third study of school progress was again carried out with a smaller sample of children whom we studied in greater depth in a follow-up of reading progress from Grade 2 to Grade 4.

When the children from the Grade 2 survey study were in Grade 4, we followed-up approximately half of those who had been struggling to read in Grade 2 (some were not able to be contacted, or their parents declined to have them included, and some lived too far away to be visited). We also included for comparison two other groups of children: those who had behaviour problems but were reading normally in Grade 2; and a comparison group of children who had neither reading nor behaviour problems in Grade 2. We saw a total of 156 children. All the children were visited at home and assessed with the Neale Analysis of Reading Ability Test, the Schonell Spelling Test, and a brief test of their intelligence. Parents and teachers rated the adjustment of all the children at home and at school.

The first important finding was that very few RD children 'recovered' between Grade 2 and 4. Five children with RD but no behaviour problems in Grade 2 (14 per cent) were reading at a normal level in Grade 4; four children with both RDs and behaviour problems likewise (11 per cent). Seven of the RD only children (19 per cent), and 3 (8 per cent) of the RD plus behaviour problem group were 'borderline', that is, they had moved closer to a normal reading level but were considered still 'at risk'. Hence the study showed that it is not the case, as is sometimes claimed, that children 'grow out' of their learning problems.

Overall, spelling was much worse than reading among the RD children at Grade 4, with almost all being at least 18 months behind the appropriate age-level of skill. Improvement in reading was not related to severity of early reading problems, nor to gender, nor to whether the child had received any special help. Importantly, the group with RD plus behaviour problems had made significantly poorer progress than the RD only group.

Those children who had improved were more likely to have parents of higher education and occupational status. While we have no direct evidence on this from the project, it may suggest that if parents encourage and assist their children, and value reading achievement very highly, this may be helpful in some cases. There are other children, of

course, who continue to have difficulties no matter how concerned and active their parents might be.

Another interesting finding was that children with behaviour problems who were reading well, improved in their adjustment by Grade 4; almost half were reported to be significantly better adjusted in their behaviour in the classroom. So good progress in reading may help a child to make a better adjustment in the school, in spite of early problems.

Looking back at the early histories of the children with behavioural difficulties (many of whom also had RDs), showed that they could be distinguished from non-problem children by a history of difficult temperament, and problems with behaviour as far back as toddlerhood. This is further evidence that, for some children, early behavioural difficulties lead them into school learning difficulties. Without some help in learning to manage their behaviour, before they begin school, there is a risk of longer-term problems. A particular focus that is needed to help with this risk situation should be on problems of attention, concentration, distractibility, persistence, compliance, and general self-regulation of behaviour.

The children who had just reading problems could not be distinguished from the normally reading comparison children on any early variables, so we could not have predicted their reading difficulties from our knowledge of their temperament and early socio-emotional development. However, as seen in the studies of language-delayed and Grade 1 RD children reported earlier, there are some hints that when phonetic and language abilities are delayed in their development, these children are 'at risk' for continuing RD.

#### ***Reading Study 4***

Our fourth study of learning problems came from a further survey of reading progress when almost all of the children were in Grade 6. This was part of our 1994 survey of all project families.

Again, we asked teachers from across the state to give a reading test (Australian Council for Educational Research Word Knowledge Test, Level D) to the project child in their class. This 40-item test was similar in format to the test used in Grade 2. The child had to choose the word closest in meaning to a specified word; for example, for 'berthed', the options were 'reached', 'docked', 'settled', and 'camped'. Scores for the ATP cohort ranged from 0 to 37. A quarter of the project children were very much below-average for their age (below the 20th percentile), and most of this group were boys (64 per cent versus 36 per cent girls). At the other end, 16 per cent of children were very much above-average (above the 80th percentile), and almost equal numbers of boys and girls were above-average, or very good readers. As expected, boys seemed to have 'caught up' to girls in their reading skills by Grade 6, for the most part.

We had data for 147 of the RD children from study 2. Most of these were still experiencing difficulties: 44 per cent were very much below-average, 22 per cent were below-average, 14 per cent were average, and 6 per cent were above-average readers. These data showed just how persistent reading problems are, even though some children do 'recover'.

#### ***Reading Study 5***

The fifth study was carried out by Sharon Waring for her Masters research thesis in Clinical Neuropsychology.

A smaller group of the project children who had shown reading problems in Grade 2 were visited at home and completed some neuropsychological tests, and tests of reading progress in Grade 6 (end of primary school). We were investigating whether there were

particular cognitive abilities (such as memory) which were associated with recovery from early reading difficulties.

About one-third of this group of children with early reading problems were reading at age-appropriate levels in Grade 6. The remainder were still behind, particularly in their spelling ability levels. The best predictor of recovery for boys was the absence of persistent behavioural problems, rather than specific cognitive abilities. Phonological skills also affected progress, in that those who were still RD had not managed to develop phonological skills sufficiently well to help them to achieve normally by Grade 6. For girls, none of the factors we measured were associated with recovery, so the origins of their difficulties remain somewhat of a mystery to us. It may be that there were other attributes that we had not measured in detail in our study (such as early language deficits) which played an important role in reading achievement for girls.

### *Reading Study 6*

Our final reading study occurred when the children were 13–14 years old and most were in Grade 8.

We visited as many of the children whom we knew to have had early reading difficulties as we could (133 teenagers). We tested them all on word and sentence reading, written arithmetic, and written spelling. Almost half of the children who had been behind in reading in Grade 2 still had reading difficulties at 13–14 years, while almost two-thirds had spelling and/or maths difficulties. Overall, more than 80 per cent had learning difficulties of one kind or another. Whether or not they had received remedial assistance did not seem to affect outcome.

For boys, the strongest risk factors associated with persistence of learning difficulties were vocabulary knowledge and earlier behaviour problems, with family socio-economic status also adding a small amount of risk. However, again we found no clear specific predictors of outcome for girls, even though, as with the boys, the more risk factors they had, the more likely they were to have continuing difficulties. The pathways to reading difficulties for girls remain poorly understood, and deserving of further research.

## Characteristics of children who were reading well at 7–8 years

Of course, the majority of children in the sample were reading at an average or above-average level in Grade 2 (see Table 3 above). We looked back at the histories of the children who were reading very well during this third year of primary education, that is, those who had made a good start in the critical early years of education. The good readers differed from struggling and average readers as follows:

- they had lower levels of behavioural difficulties at all ages;
- they had more positive temperamental characteristics at all ages;
- they had more positive ratings by teachers from school entry onwards on, including readiness for school, temperament characteristics, behavioural adjustment, social skills, and academic competence;
- they came from more advantaged family environments.

Our follow-up studies all showed that very few children who began well later developed either reading or behavioural difficulties, thus indicating that a successful start augurs very well for continuing good academic and psycho-social adjustment. Social class clearly exerted a persistent effect, with children from families whose parents were better educated and of higher occupational status having an advantage from the beginning of life in their chances of success at school. This unsurprising finding is repeated in studies

all over the world. It was also noticeable that good readers in Grade 2 had consistently been rated as more temperamentally persistent by both parents and teachers, over the early years. Thus temperament, particularly the capacity to control, focus and maintain attention, also influenced early learning progress.

## Peer relationships

To have satisfactory relations with children of one's own age is a very important aspect of children's social adjustment, and becomes increasingly central as children move into adolescence. We thought that child temperament characteristics might have a significant impact on the development of both good and problematic relations with peers (age-mates). At 11–12 years, we obtained information about peer relations from the children, their parents, and teachers. We asked how popular the children were with their peers, how much they interacted with peers, how many friends they had, and how easy they found it to interact with peers. From these measures, we formed three groups of children: those who appeared to have very good relations with peers, those with problematic relationships, and an average group.

We looked at the temperament characteristics of these three contrasting groups at six previous survey points from infancy to 9–10 years. There were only slight differences between groups at infancy. But from 1–3 years, children who went on to develop problematic peer relations were more irritable, uncooperative and inflexible than those who went on to develop average or good relations. Prominent among those who later developed peer problems were early-emerging behavioural difficulties like aggressive behaviour, and anxious-fearful behaviours, and their parents had regarded them as more difficult children from early childhood. At the start of school age, their teachers reported them as less ready for school, and as having less social competence. Thus, from early childhood, children who later had problems with their peers appeared to have more difficulties adapting to change and in fitting-in with others' expectations, as well as more acting-out and emotional problems, and signs of immaturity. Presumably these characteristics contributed to their emerging difficulties with peers.

Some differences in predictors were found between boys and girls. Most notably, boys who later developed peer problems were less persistent and less able to stay on-task than those with good or adequate peer relations, whereas these factors were not predictors for girls. Irritability and inflexibility discriminated between groups of boys more strongly than they did for girls, suggesting that temperamental dimensions may have a stronger impact on boys' social relationships than on those of girls. Levels of shyness and sociability did not differentiate between those with good and poor peer relations. In contrast to overseas studies which have suggested that school failure leads to rejection from peers, we found that poor performance at school work was not related to peer relations. Neither were socio-economic status nor family life stress related to peer relations.

At 11–12 years, the children with peer problems were less assertive, more anxious and fearful, had poorer self-control and were less cooperative, compared with those with average or very good peer relations. Boys with peer problems also had more conduct problems and reported a poorer relationship with their parents. Thus their problems with peers were part of a constellation of adjustment difficulties. These findings suggest that the best way to help young children with problems with their peers might be to address their general social skills and behaviours, rather than focusing specifically on how they relate to other children.

Another facet of peer relations is the impact on children of having friendships with children who engage in socially maladjusted or unacceptable behaviour such as

delinquency and substance use. Considerable work in the US has documented the risk involved in a child associating with what are known as 'deviant peers'. By asking project teenagers about the behaviours of their best friends, we have been able to determine the extent to which they associate with 'deviant peers', and whether this is related to their own behavioural adjustment. As will be seen in the section on adolescence below, one important finding here is that a major risk for teenage substance use and delinquency is having a friendship with a substance-using or delinquent peer.

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***Further reading***

See items 42, 45, 49, 50, 51, 54, 57, 65 and 68 in the list of Australian Temperament Project publications and Nursey (1993) in the References at the end of this book.