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Appendix 4.1: Frasier's 10 TABs (Frasier, 1997)

1. Motivation
Forces that initiate, direct and sustain individual or group behaviour in order to satisfy a need or attain a goal.

2. Interests
Activities, avocations, objects, etc., that have special worth or significance and are given special attention.

3. Communication Skills
Transmission and reception of signals or meanings through a system of symbols — codes, gestures, language, numbers, etc.

4. Problem Solving
Process of determining a correct sequence of alternatives leading to a desired goal or successful completion or performance of a task.

5. Memory
Exceptional ability to retain and retrieve information.

6. Inquiry
Method or process of seeking knowledge, understanding or information.

7. Insight
Sudden discovery of the correct solution following incorrect attempts based primarily on trial and error.

8. Reasoning
Highly conscious, directed, controlled, active, intentional, forward looking, goal orientated thought.

9. Imagination/Creativity
Processes of forming mental images of objects, qualities, situations or relationships which are not immediately apparent to the senses. Problem solving through non-traditional patterns of thinking.

10. Humour
Ability to synthesise key ideas or problems in complex situations in a humorous way; exceptional sense of timing in words and gestures.

Appendix 4.2: Torrance's (1998) Creative Positives

1. Ability to express feelings and emotions.
2. Ability to improvise with commonplace materials and objects.
3. Articulateness in role playing, sociodrama and story telling.
4. Enjoyment of and ability in visual arts, such as drawing, painting and sculpture.
5. Enjoyment of and ability in creative movement, dance, dramatics, and so forth.
6. Enjoyment of and ability in music, rhythm and so forth.
7. Use of expressive speech.
8. Fluency and flexibility in figural media.
9. Enjoyment of and skills in group activities, problem solving and so forth.
10. Responsiveness to the concrete.
11. Responsiveness to the kinesthetic.
12. Expressiveness of gestures, body language and so forth, and the ability to interpret body language.
13. Humour.
14. Richness of imagery in informal language.
15. Originality of ideas in problem solving.
16. Problem centredness or persistence in problem solving.
17. Emotional responsiveness.

Appendix 4.3: NSW Students Awarded School and Higher School Certificate

NSW Students Awarded the School Certificate*

Year	Aboriginal	Non-Aboriginal	Total	% Aboriginal
1991	1,035	75,917	76,952	1.34%
1992	1,026	75,043	76,069	1.35%
1993	1,035	74,179	75,214	1.38%
1994	1,193	73,371	74,564	1.60%
1995	1,083	73,258	74,341	1.46%
1996	1,259	75,250	76,509	1.65%
1997	1,105	76,978	78,083	1.42%
1998	1,218	77,021	78,239	1.56%
1999	1,149	76,565	77,714	1.48%

*Courtesy of the NSW Board of Studies

NSW Students Awarded the Higher School Certificate*

Year	Aboriginal	Non-Aboriginal	Total	% Aboriginal
1991	350	53,605	53,955	0.65%
1992	420	57,256	57,676	0.73%
1993	417	56,829	57,246	0.73%
1994	420	55,903	56,232	0.75%
1995	493	54,443	54,936	0.90%
1996	465	54,025	54,490	0.85%
1997	446	54,256	54,702	0.82%
1998	568	55,889	56,457	1.01%
1999	435	57,140	57,575	0.76%

*Courtesy of the NSW Board of Studies

Appendix 4.4: Extracts from Australian State Giftedness and Talent Education Policies

New South Wales

The NSW Department of Education and Training (DET) definition and policy statement with regards to giftedness and talent appear below:

> Gifted students are those with the potential to exhibit superior performance across a range of different areas of endeavour.
>
> Talented students are those with the potential to exhibit superior performance in one area of endeavour.
>
> It is critical for gifted and talented students to be given appropriate opportunity, stimulation and the experiences to develop their potential and satisfy their learning needs. Special emphasis will also be given to identifying those students whose gifts and talents may have been previously overlooked.
>
> Gifted and talented students are to be found in all communities regardless of their sociocultural or socioeconomic backgrounds.
>
> It is important for teachers to be sensitive to factors which can help or hinder the recognition and development of special gifts and talents in young people. These factors are:
>
> - motivation
> - self esteem
> - peer pressure
> - socioeconomic and sociocultural
> - cultural and linguistic
> - disability
>
> Giftedness and talent may occur in many different areas including the creative arts, academic subjects, social and leadership skills and sporting interests.
>
> Opportunities for students to achieve their full potential should be provided as a matter of daily routine. Such opportunities may be created within a class, among groups of classes or schools, or by regionally or centrally-designed programs and initiatives.
>
> (New South Wales Department of Education and Training, 1991, p. 2)

South Australia

The South Australian definition and policy statement with respect to giftedness and talent are presented below:

Children and students with exceptional abilities are likely to be present in all educational settings. They require challenges which match their abilities. While they have often been perceived as being capable of high achievement without assistance, gifted children and students are in fact at risk of not fulfilling their potential if they are not identified and if their talents and skills are not nurtured.

Personnel in schools and children's services must take appropriate steps to meet these children's needs.

Acknowledging and providing appropriate educational settings is essential if children and students with exceptional abilities are to realise their full potential.

To ensure that gifted children and students reach their full potential, certain issues need to be addressed. These include:

- social or cultural bias against high ability and high achievement
- stereotyped assumptions determining which talents or gifts are valued
- lack of access to appropriately challenging educational experiences
- failure to identify students' exceptional potential, especially when it is masked by special needs in other areas — notably disability, poverty, isolation, gender, non-English speaking background and Aboriginality. Lack of motivation, under-achievement and behavioural difficulties can also influence the identification of a student's exceptional potential.

A 'gifted' child or student will possess, to an outstanding degree, demonstrated ability or potential in one or more of the following areas:

- general intelligence
- specific academic areas
- visual and performing arts
- psychomotor ability
- leadership
- creative thinking
- interpersonal and intrapersonal skills.

Appropriate intervention by the family, community, schools and children's services can help a gifted child or student to reach full potential.

(The South Australian Department of Education and School Services, pp. 1–2).

Queensland

The Queensland definition and policy statement with respect to giftedness and talent are as follows:

Gifted students are those who excel, or have the potential to excel in general or specific ability areas.

This belief is inclusive of all ability areas, is non-discriminatory on the grounds of gender, cultural origins or socioeconomic background, and provides the opportunity for the achievement of excellence to be explored within the student's own context. This includes students who are geographically isolated and those with disabilities. While this belief is a useful starting point, there is need to recognise the unidentified gifted students — particularly those who under-achieve. (Education Queensland, 1993, p. 2)

The following brief generalisations can be made about giftedness.

- Giftedness is multifaceted and can exist in one or several ability areas.
- Gifted students may exhibit exceptional ability at different stages of their development and this is often accompanied by considerable task commitment and creativity. Gifted behaviours are not necessarily manifested in traditional curriculum areas, nor are they always demonstrated in socially acceptable ways.
- Giftedness is developmental, and gifts become apparent at different stages of life.
- Each individual has unique qualities and, while common characteristics can be identified, no two gifted students will exhibit the same set of characteristics nor will there be identical needs.
- Gifted students are found in all socioeconomic and cultural groups.
- Several factors influence the achievement of students' potential. These include: recognition from their own cultures; acquisition of necessary skills to facilitate achievement; development of positive self concept; and appropriate home, community and school support.

(Education Queensland, 1993, p. 2)

Tasmania

The Tasmanian definition and policy statement with respect to giftedness and talent are presented below:

Students who are gifted are students who show advanced development, or have the capacity for advanced development, in any valued area relative to their age peers to a degree that modification to their educational program is necessary.

The concept of giftedness encompasses three major aspects:

1. Students who are gifted often have asynchronous development where intellectual, physical and social development may be occurring at dramatically different rates.
2. Giftedness is multifaceted encompassing a wide range of abilities and cannot be measured according to a single dimension: Similarly a range of programs may be needed to cover these dimensions.
3. The development of an innate gift is likely to be influenced by environmental factors such as significant people, events, and experiences as well as intrinsic variables such as motivation and personality. This means that children may be identified as gifted at different stages of their schooling.

There is no reliable or consistent distinction between the terms 'gifted' and 'talented' to justify distinguishing between the two terms. This policy and the support material will use the term gifted.

(Tasmanian Department of Education, 1998, pp. 1–2]

Northern Territory

The Northern Territory definition with respect to giftedness and talent is:

> Gifted students are those capable of high performance with demonstrated achievement and/or potential ability in one or more specific areas
>
> (The Northern Territory Department of Education, 1992, p. 6).

Western Australia

The Western Australian definition with respect to giftedness and talent is presented below:

> 'Giftedness' refers to a student's outstanding ability in one or more domains (e.g. intellectual, artistic or sensorimotor) and 'talent' refers to outstanding performance in one or more fields within these domains: that is, **talent emerges from ability** as a consequence of the student's learning experience.
>
> (Western Australian Department of Education, 1997, p. 1).

Françoys Gagné's model of gifted and talented education has been adopted and underpins the policy and practice.

Victoria

The Victorian definition and policy statement with respect to giftedness and talent are presented below:

> Through the Bright Futures Policy the Victorian Government recognises an inclusive definition of 'giftedness'. This embraces and encourages excellence in all forms of intellectual, academic and creative endeavour and acknowledges that:
>
> - it is difficult to isolate a single definition of giftedness that encompasses the broad spectrum of human abilities and accounts for culture, class, gender and domain
> - generally, the types of definitions that have been proposed by researchers and education authorities move toward a broad concept of giftedness over a wide range of human endeavours
> - there are varying degrees of giftedness, not only in traditional academic areas but also in areas such as art, music, leadership and sport
> - gifted students have particular learning requirements and need to be nurtured to ensure their potential is fully developed
> - students may indicate a potential to achieve that is not always reflected in their school work or through the school's assessment procedures
> - within the range of giftedness different levels of intellectual potential and ability require different types of educational provision.
>
> (Education Victoria, 1999, p. 4)

Appendix 5.1: Pilot Studies and the Internal Structure of the Experimental Design

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Assessment Environment

Physical Environment

A suitable physical environment was essential, as was demonstrated by the unsettled nature of the first session of Pilot II which was held in an unfamiliar and crowded environment. This contrasted with the settled nature of all of the other sessions, which were held in familiar and spacious environments. The decision was made not to compromise on this aspect of the data collection when negotiating the research details with the respective schools.

Social Environment

The establishment of a trusting and mutually respectful working environment was essential to maximise benefits from the intervention sessions. Pilot II had several 'ice breaking' events built into sessions one and two, and it was these that eventually established trust and respect between the students and me. The 'ice breaking' events were of a ball games nature.

A culture of mutual respect was also established from the first meeting. A list of rules was formulated by the researcher and the children. These rules basically called for mutual respect between everyone in the group and a set of working conditions to allow a positive and productive working environment. I showed respect to all participants and from the very first meeting expected this respect to be returned. In Pilot II one of the boys pushed the limits of acceptable behaviour and was asked to leave. He seemed shocked at this response and literally begged to stay, after which his and the group's behaviour improved dramatically.

The presence of the school's AEA during the data collection provided a familiar Aboriginal person that allowed the 'ice breaking' process to occur

more readily. My acceptance by the AEA helped develop the necessary trust in the students.

The friendly, warm and 'fun' environment which I sought to develop in the study group was designed to maximise student enjoyment. This environment was successfully developed in both pilots with the result that the students in pilot II were waiting for my arrival at the school door on days 4 and 5.

Cultural Environment

The issue of shyness exhibited by young Aboriginal children with a non-Indigenous stranger was clearly demonstrated in Pilot I, leading to the decision that the intervention sessions should be carried out in some sort of group environment. It was decided that this number should be four which allowed for a high degree of interaction with every child, as demonstrated in Pilot II. The optimum group size for this study was taken as four but smaller groups (not less than 2) were used if the school numbers made it essential.

'Shaming' was common amongst Aboriginal children and occurred when a student refused to participate or stand out in a group. In more able Aboriginal students the fear of 'shaming' can result in these students not participating to the best of their ability. While the pilot studies did not produce any major problems with 'shaming' it had the potential to be an inhibiting factor on the maximal performance of the more able students, especially if they were in a group of less able students. To minimise this potential problem it was decided that the groups should be composed of students of similar abilities, wherever possible. This view was supported by the absence of significant amounts of 'shaming' in the Anaiwan Project (1998), a project for gifted and talented Aboriginal children in the same school district. The general consensus among the Aboriginal people involved in that project was that the gathering of a group of talented students removed much of the fear of standing out (Green, P. 1998, personal communication).

The non-reliance on literacy skills in the whole pilot program appeared to have worked well. This put everyone on an even footing with respect to accessing the information in the presented material.

Metacognitive Intervention

Metacognitive Strategies

The pilot programs demonstrated that the intervention strategies chosen worked well once trust and mutual respect were established. The main problem was developing the necessary skill levels for the successful application of the chosen strategies. While the two pilots were sufficient to assess the worth of the strategies and the application techniques, I spent considerably more time to refine and master these techniques after the pilot programs.

Instrument Administration

The administration of the three instruments (the RSPM, IAR and SDQ I) could be satisfactorily carried out in large groups. All of these instruments were designed to be administered to groups. The largest number of students in the pilot program was four and this group size presented no difficulties when the RSPM, IAR and SDQ I were group administered. Consequently, it was decided to group administer all of the above instruments.

The Intervention Items

The items in the first intervention session (set A, B and C analogues) proved as suitable in Pilot II as they did in Pilot I. These items had remained unchanged from the initial pilot. The second intervention (set D and E analogues) in Pilot II proved to be much more suitable than those used in Pilot I. The changes made were to remove a number of items that were too difficult for this age group and replace them with less complex items.

Overall Time Frame

Pilot II was set up and run over five sessions, with each one-hour session held on the Wednesday of five consecutive school weeks. This format worked reasonably well but several problems quickly became obvious.

1. By having the study over a 5-week period, the chances of having students miss sessions or shift schools were high. There was a high absentee rate

amongst Aboriginal students in the school district in question. Of 14 schools surveyed in this school district the daily rate of absenteeism of Aboriginal students in the first half of 1999 varied from a low of 6% to a high of 30% for individual schools and averaged 16% across all schools surveyed (Oxenbridge, J. Department of Education and Training, 1999, personal communication). This represented a real concern. The chosen solution was to keep the number of days over which the data was collected to a minimum, while maintaining the necessary five sessions. This also served to reduce the number of students lost to the study due to family relocation.

2. The intervention sessions needed to be completed in order and in approximately the same time frame by all children. The solution was to have both intervention sessions on the one day. I felt that the very promising intervention outcomes experienced in Pilot II could be expected with compressed intervention sessions as long as the children were given a long break between sessions and the sessions were seen as fun and rewarding.

3. The one hour sessions used in the intervention seemed ideal.

4. The sessions involving the RSPM and interventions I and II all required a high degree of concentration. Consequently it was decided to deliver the SDQ I and IAR instruments in a separate session to minimise fatigue.

Parental Permission

In order to maximise community awareness and support for the research program the school AEA visited any parents who had not returned permission notes. The outcome of this process was 100% participation of the available children in the pilot study. This method was adopted for the main study.

The intervention method was developed as the result of theoretical and practical considerations revealed by the study pilots and the literature. The intervention procedures and components are discussed below.

The internal structure of the experimental design was developed initially from a theoretical consideration of the factors thought to be necessary to investigate the major research question and finally with the practical aid of

two pilot studies which were used to field test all aspects of the experimental procedures. The final experimental methods used were refined as a result of the practical findings of the pilot studies.

The Pilot Studies

The pilots of the study were carried out at two schools in country New South Wales in the same area that the study was later carried out.

Pilot I, March 1999

The initial pilot, carried out in school, coded 3-C, on 12th and 19th March, 1999, was used to trial and refine the intervention procedure. During the first intervention (day one) I worked with two students, a boy and a girl, both aged 9 years. This number was fewer than expected (it was anticipated that four students would be available), and reflected problems that were to arise later, concerning school attendance. During the second intervention (day two) I was forced to work with only one student as the boy was absent. This pilot was not only designed to look at the suitability and application of the intervention but also to look at social and cultural issues.

The Intervention Items

The intervention material proved to be satisfactory on day one, where analogues of sets A, B and C of the RSPM were presented, with both students handling the degree of difficulty and the presentation order with acceptable ease. The students were clearly motivated by their continued success in reaching correct solutions. It was planned that this intervention was to be conducted with two 15-minute sessions, with a 5-minute rest break in between.

The intervention material on the second intervention session proved to be far less satisfactory with too many of the RSPM analogues in the 'too hard' category in sets D and E. The girl, who had performed brilliantly during the first intervention, lost confidence as she encountered too many difficult analogues. This problem may well have been exacerbated by the fact that she was alone. Her shyness became obvious and hindered our interaction, thus

restricting scaffolding. The absence of an Aboriginal Education Assistant may well have been another factor in the child's shyness.

The Intervention Application

The intervention application on day one presented few problems other than those of a mechanical nature. Some problems occurred with the simple tasks such as material distribution and the nature of the room. It became clear that the correct physical, social and cultural environments would be essential for the efficient and consistent administration of the dynamic testing procedures. Thirty minutes were allocated for the whole of each intervention but it took approximately 40 minutes with this group. It also became obvious that this time would vary with such factors as group numbers, ability and dynamics.

The intervention application on day two was much more efficient mechanically, but produced time problems related to the inappropriateness of some of the intervention items and the shyness of the lone student. The need for a flexible time allocation for the intervention sessions became obvious as a result of the above observations.

Pilot 1 gave a number of insights into the functioning of the physical, social and cultural environments, as well as gaining permission from parents. These issues are discussed below.

Pilot I Outcomes

The Assessment Environment

Physical Environment

The importance of a suitable physical environment became obvious immediately. This pilot was carried out in the school library, which was not being used at the time. The space of this building allowed great flexibility in the physical layout of the materials and the positioning of students. Furthermore, it was free of miscellaneous traffic and was thus ideal. It was determined that the ideal physical environment should have the following characteristics:

1. Be relatively free from distractions.

2. Be familiar to the students.

3. Have plenty of space so that unwanted interaction between individuals is avoided.

4. Have individual tables to work on.

5. Have access to an overhead projector.

Social Environment

The 'ice breaking' session that was part of the full dynamic assessment procedure was absent from this pilot as it was aimed at developing the actual intervention only. The positive social environment that is necessary for the best working environment between the students and myself was impossible to develop in only one visit, although the students were extremely co-operative and tried hard. The problem of shyness experienced on the second day of intervention when only one child was present would suggest that working in a one-on-one environment is not the best option with Aboriginal children, especially young girls (Personal communication, A. Eckermann, March, 1999). The ethical need for a third person to be present was also noted. The maximum working number was not explored in this first pilot due to the absenteeism previously referred to.

Cultural Environment

Several cultural issues such as shyness, shaming, gaps in written language development and myself being non-Indigenous were addressed when planning the first pilot. With Aboriginal children the twin issues of shyness and 'shaming' needed to be considered when constructing the best scaffolding environment. The optimum scaffolding would be achieved in a one-to-one situation, all other things being equal. However, it was predicted that working one-on-one would generate shyness from many Aboriginal children. This proved to be so in the day two intervention. 'Shaming' was seen as a possible problem in the context of a large or poorly matched group with respect to academic potential. It was envisaged that the more able children may not wish to stand out as above their friends and would thus not participate as actively as they were able. This issue of shaming was not assessed in this pilot

due to the lack of children who were eventually available. The issue of gaps that may exist in literacy skills was dealt with by removing any reading or writing from the dynamic assessment procedure. The non-Indigenous researcher issue was to have been addressed by having an Aboriginal Education Assistant (AEA) at each session but this was not possible at this school. Fortunately I had an extensive background of working with Aboriginal people and was able to establish a relaxed and positive working environment. It was clear that the presence of an AEA at all data collection sessions would be an important ingredient of a successful program.

Parental/Guardian Permission

Formal permission notes were not sent home by the school. Permission was sought and received by a phone call. This was clearly unsatisfactory for the full study but was the pathway that the school opted to take in this pilot program. Both students received permission to participate with no problems.

A second pilot was used to assess the changes made to the dynamic testing procedures after Pilot I and to examine the effectiveness of a range of socio-emotional and cultural initiatives introduced at this point. The methods used used in and the outcomes of this pilot are given below.

Pilot II, March, April and May 1999

The second pilot was designed to evaluate the entire revised data gathering procedure as it would occur in the actual study. Pilot II was carried out in school, 9-I, on 24th and 31st March, 21st and 28th April and 5th May 1999. The plan was to gather the data over 5 consecutive Wednesdays, with each visit allocated 1 hour of school time. The visits were slotted in between recess and lunch (11.30 am - 1.00 pm).

Planned data collection schedule

Day 1, 24th March

a. 'Ice breaking' activities (ie ball games, discussion)

b. SDQ I (self concept measure) 20 minutes (approximately)

c. IAR (locus of control measure) 15 minutes (approximately)

Day 2, 31st March

a. Raven's Standard Progressive Matrices (RSPM) pretest, 40 minutes

b. Ice breaking activities (ball games)

Day 3, 21st April

Intervention one, sets A, B and C RSPM analogues. Two periods of 20 minutes with a 5-minute rest break between.

Day 4, April 28th

Intervention two, sets D and E RSPM analogues. Two 20 minute periods with a 5-minute rest break between.

Day 5, May 5th

a. Raven's Standard Progressive Matrices posttest, 40 minutes.

b. Pilot finished, visit to McDonald's restaurant.

Six Aboriginal students from Years 3 and 4 were initially nominated to participate in the pilot study, but only five students attended the first day as one student had left the school.

Pilot Results

Day 1, 24th March

Five students attended the first day. One of the original nominated group had left the school. The group consisted of four boys and one girl.

This initial session was held in the staffroom, which proved to be unsuitable, as most of the students were clearly unsettled in this environment. The problem was further exacerbated by frequent intrusions by staff members. This situation made the 'ice breaking' process and data collection very difficult. It was planned to complete the SDQ I and the IAR, but only the former was completed. It was not a matter of time that stopped completion of both tasks, but rather a matter of a very unsettled group. I was dissatisfied

with the group dynamics outcome from this first day. The four boys displayed poor concentration and a real potential to be disruptive. The presence of the school AEA was very positive and perhaps prevented a major disruption to the session.

The 'ice breaker' session was very difficult. The students were clearly highly agitated and disruptive behaviour was the norm. It would appear that the initial level of trust given by this group was very low.

Day 2, 31st March

Since one of the boys was leaving the school next week, he was removed from the program. All the others were present.

The venue was moved to the school library which offered a familiar, roomy environment where disruptions at this time of day were minimal. The students appeared to be much more settled in this environment.

The RSPM was completed by all students in the required time but two of the four students gave up very quickly when the more difficult sets were reached. It took some prompting to convince these students to complete sets D and E.

The 'ice breaking' that followed involved passing a football and was generally relaxing and fun. This seemed to produce the most positive results to date, in that the students participated more freely and seemed much more relaxed than the previous day. The 'fun' ethos that I was trying hard to establish was achieved.

Day 3, 21st April

This week the female student was absent. She had a poor attendance record generally but this was the first pilot day that she had missed.

The library was used once again, with success.

The first intervention began with generally poor concentration from the three boys and with this came the inevitable disruption. Each of the analogous puzzles was accompanied by a solution either by full scripting (as

in the case of the first example in each set) or by student/researcher interaction. As this scaffolding process developed the students began to try harder and consequently to discover the patterns for themselves. They were concentrating better, not giving up as quickly and taking more time thinking how to approach the puzzles. The group appeared to be achieving more at the end of this intervention even though these puzzles were considerably harder than the early puzzles.

Day 4, April 28th

All students present.

The library was used once again, with success.

The female student had missed the first intervention so progress was slowed at the beginning to allow her to become familiar with the scaffolding process. This happened quickly and, in fact, she was ahead of at least two of the boys after only a few puzzles, despite having missed the first intervention.

The boys tried much harder and solved more puzzles themselves during this intervention than they had during the first intervention, despite the fact that the sets D and E analogues used here were harder than in the first intervention. Every puzzle was successfully solved either by the student alone or from interaction with me, as in intervention one.

There was a distinct improvement in all the students. They seemed more confident, were prepared to try harder for longer and to seek solutions that were not at first obvious. 3-9-I-m (student code) found the going tough through this intervention but kept trying. 2-9-I-m was still tending to rush his answers but was much better in this regard and he was not giving up as easily. 4-9-I-m still rushed things but he was genuinely trying and not staring around the room constantly as he did in much of the first intervention.

5-9-I-f had missed the first intervention so she was put through this process about an hour later. She finished all of the puzzles in less than 20 minutes, which was half the time required by the group. This student worked quickly, accurately and confidently.

Day 5, May 5th

The female student was absent initially but joined the group later. All the other students were present.

The library was used once again, with success.

All students worked quietly and tried hard throughout the entire assessment. I had hoped to complete the IAR assessment that had been missed on the first day, but it quickly became obvious that they were too mentally tired to complete this task satisfactorily. Two of the boys had completely lost concentration and were not trying.

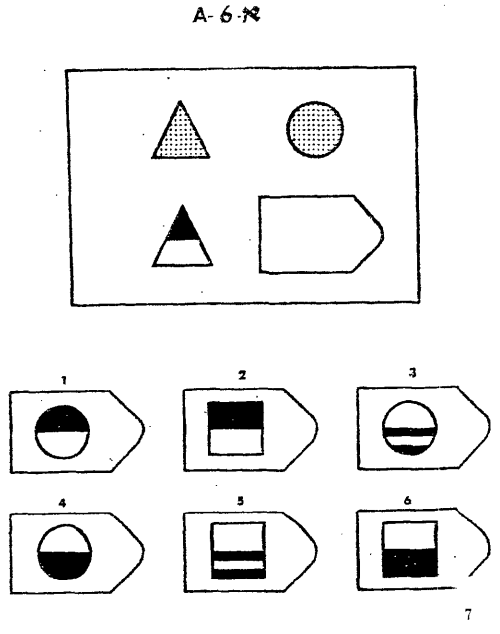
Parental/Guardian Permission

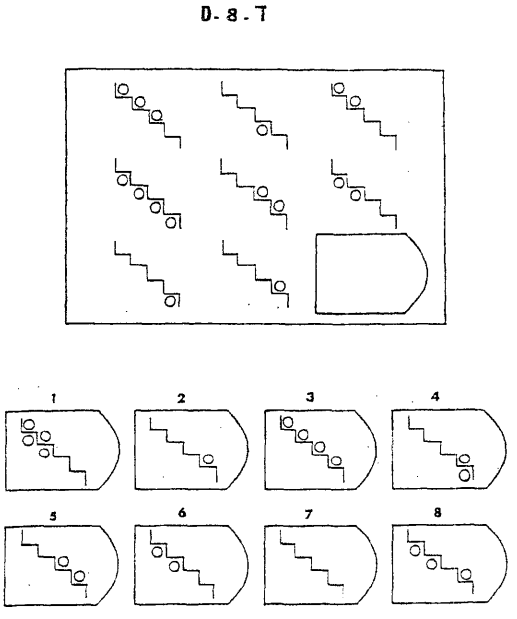
Parental/carer permission was formally sought for Pilot II using the information letter and permission notes approved by the University of New England Ethics Committee, Department of Education and Training and the Catholic Schools Office. Following consultation with the school principal the information letter and permission notes were hand delivered by the schools AEA who also provided individual explanations to families where requested. This approach resulted in all available students being given permission to participate in the research.

Appendix 5.2: Intervention Cognitive Analogues

The Cognitive Analogues

The items used in the metacognitive intervention (with the exception of set A, below) were selected, from the LPAD Variations (B.8-B.12) and LPAD Set-Variations II. These items have similar layout and access comparable cognitive processes as the RSPM. They are presented in 2x2 and 3x3 matrices. Two examples of the LPAD matrices are presented below:





Set A

Set A of the RSPM was considered to be so elementary that only two intervention items were used.

Item 1 consisted of a photograph of the international Aboriginal athlete, Cathy Freeman. It had a small section missing in a similar way to the set A items of the RSPM.

Item 2 consisted of an analogue of Set A RSPM which was used to develop the basic processes of metacognition.

Set B

Set B intervention items were obtained the LPAD Variations (B.8-B.12). The six items used in the set B intervention were:

Set B intervention item	Source	Page
1. A-6-N	LPAD Variations (B.8-B.12)	p. 7
2. E-6-π	LPAD Variations (B.8-B.12)	p. 35
3. A-5-N	LPADVariations (B.8-B.12)	p. 6
4. E-5-π	LPAD Variations (B.8-B.12)	p. 34
5. B-5-1	LPAD Variations (B.8-B.12)	p. 13
6. B-6-1	LPAD Variations (B.8-B.12)	p. 14

Set C

Set C intervention items were obtained from the LPAD Set-Variations II. The six items used in the Set C intervention were:

Set C intervention item	Source	Page
1. A-2-N	LPAD Set-Variations II	p. 3
2. B-1-1	LPAD Set-Variations II	p. 16
3. B-2-1	LPAD Set-Variations II	p. 17
4. B-5-1	LPAD Set-Variations II	p. 20
5. B-10-1	LPAD Set-Variations II	p. 25
6. B-3-1	LPAD Set-Variations II	p. 18

Set D

Set D intervention items were obtained from the LPAD Set-Variations II. The six items used in the Set D intervention were:

Set D intervention item	Source	Page
1. C-1->	LPAD Set-Variations II	p. 32
2. C-4->	LPAD Set-Variations II	p. 35
3. C-8->	LPAD Set-Variations II	p. 39
4. C-10->	LPAD Set-Variations II	p. 41
5. C-3->	LPAD Set-Variations II	p. 34
6. C-2->	LPAD Set-Variations II	p. 33

Set E

Set E intervention items were obtained from the LPAD Set-Variations II. The six items used in the Set E intervention were:

Set E intervention item	Source	Page
1. D-1->	LPAD Set-Variations II	p. 43
2. E-1-π	LPAD Set-Variations II	p. 54
3. D-4->	LPAD Set-Variations II	p. 46
4. E-3-π	LPAD Set-Variations II	p. 56
5. D-10->	LPAD Set-Variations II	p. 52

Appendix 5.3: Permission to Use LPAD RSPM Cognitive Analogues (Prof. Feuerstein)

February 18, 1999

Mr. Graham Chaffey

<gchaffe2@metz.une.edu.au>

Dear Mr. Chaffey,

Thank you for your letter. I think that the best way for you would be to attend one of our LPAD training sessions and in this way to become completely prepared for the use of LPAD instruments. If however, you cannot do this but you still want to use "variations" instruments in your research, I am ready to give you permission to use this copyrighted material under the following conditions:

1. You will have to apply it using our methodology. For this end, I am sending you a part of the LPAD manual which will give you the basic instructions.
2. Should you want to change the procedure, you will have to do it explicitly, so that the results obtained will be attributable to the change in your way of application.
3. You will send us the results of your research.

I will send you the material.

Yours,

Prof. Reuven Feuerstein
Founder and Director

RF/htf/Chaffey

To follow by mail: Materials

Appendix 5.4: Intervention Script

Intervention Script

Note: 1. The script has been designed to give as much uniformity as possible to the presentation of the metacognitive intervention. However, the type and intensity of scaffolding (interaction) required varies greatly depending on the nature of the individual or group. The script should be seen only as providing the basic approach to the intervention material. The Comments column will help put the script into context.

Note 2. This script MUST NOT BE USED without training in the methodological details.

Script:	Comments
1. Introduction • Today we are going to have some fun working out patterns and puzzles. They are like the patterns that you were working out last time we met [*when the RSPM pretest was given*]. • I am going to show you how the patterns work in one puzzle and then we are going to do some more together. • **It is important that you take your time.** Please look for any patterns that might help solve the puzzle. Ask any questions that might help you to understand how the puzzle is solved, but please don't shout out. • If you have something to say please raise your hand. • I will help all of you to understand how the puzzles work.	**The interaction between provider and the children needs to be:** **1. non-competitive** **2. mutually respectful**

2. Set A RSPM analogues: pattern 1 • You have a copy of the puzzle (**it is Cathy Freeman at the Commonwealth Games**) in front of you and there is one on the screen [overhead projector]. Look carefully at the puzzle and see if you can find any clues as to what should be in the empty box (covered area). Try to imagine what the empty box would look like if it were uncovered. Look at the four sides of the empty box before you decide what might be in the space. Could you please draw what you imagine is in the empty space. **Set A RSPM analogues: pattern 2** • You have a copy of the puzzle in front of you and it is also on the screen. Look carefully at the pattern and see if you can find any clues as to what should be in the empty box. Try to imagine what the empty space should look like if it were uncovered. In this example I want you to just follow as I explain how we might solve the puzzle. • Look at the four sides of the empty box with the question mark which covers the missing part of the pattern. **The top and bottom** of the empty box do not have any contact with the shape. **The top** of the empty box is exactly the same. **The right hand side** of the empty box has four lines coming out.	**Cathy Freeman** **Interaction with students** **Students encouraged to answer questions or comment in turn, where possible** **Analogue taken from Naglieri Nonverbal Ability Test Level E number 3** **This exercise provides an excellent opportunity to begin metacognition with the children.**

These lines are moving apart a little bit. These lines are on a solid grey background that seems like they might run through the centre of the empty space. **The left hand side** of the empty space has four lines entering it. They are moving apart slightly and are on a grey background that appears as though it might go through the centre of the empty space. • You will notice another part of the shape that has four lines on it (point out). This is just like the part of the diagram that goes through the empty space. • **Solution:** Answer 1 is wrong as it has a coloured centre at the top of the space. Also it does not contain any lines. • Answers 2 and 4 are wrong as they have a point and also have no lines. • Answers 3 and 5 both have the full background and 4 lines moving slightly apart. Answer 5 has a background that is too narrow and is thus wrong. **Answer 3 is correct as all parts of the puzzle fit this solution.**	**Comments** **Elimination concept explained**

3. **Set B RSPM analogues: pattern 1** • You have a copy of the puzzle in front of you and there is one on the screen. You will notice that there are 3 shapes with one blank space. Look carefully at the puzzle and see if you can find any clues as to what should be in the missing space. If we look carefully across the rows and down the columns there are some patterns. • On the top row the two shapes (triangle and the circle) are both FILLED WITH DOTS. • On the bottom row the triangle has the top half blacked out. Can this be the pattern on this row? • You will notice that the 1st vertical column has two triangles in it. Can it be then, that the pattern down the column is the shape? • **SOLUTION:** Can you see what the blank space should hold? • The missing shape needs to be a circle, so that means that answers 2, 5 and 6 are wrong. • The other three answers are circles but the only circle with the top half blacked in is 1, so that must be the correct answer.	**A-6-N from set 2 (B.8-B.12)** **In this puzzle the presenter provides all information to produce the solution.** **Refer to the overhead projection** **Elimination concept**

• Please look at the next puzzle. Look carefully at the three shapes and see if you can work out the pattern like we did in the last question. Look along the rows and down the columns and see if you can find the pattern. • What shape should be in the space? • Please **draw the shape** that you think will be the answer. • Does it need anything else? **Have one of the students explain answer**	**E-6-π Set 2 (B.8-B.12)** **Student input now invited comment and ask questions.** **Open ended interaction** **Extensive structure scaffolding**
• We are now going to complete some more puzzles. I want you to help me to work out how these puzzles work. There is always a pattern, we just need to find it. • Please look at the next puzzle. Look carefully at the three shapes and see if you can work out the pattern like we did in the last question. • What shape should be in the space? • Please draw the shape that you think . • Does it need anything else? **Have one of the students explain answer**	**A-5-N** **E-5-π** **B-5-1** **B-6-1**

4. Set C RSPM analogues: pattern 1. • You have a copy of the puzzle in front of you and there is one on the screen. Look carefully at the puzzles and see if you can find any clues as to what should be in the missing space. There are some patterns if we look carefully across the rows and down the columns. • You will notice that there are now 9 boxes in the puzzle, one an empty space. We need to work out what shape will fit the empty space. • The shapes are large six sided objects (hexagons) with smaller blacked in hexagons inside. • On the **top horizontal row** the large hexagon stays the same, but the smaller black hexagon is in a different position in each box. It moves across the top of the large hexagon from right to left. • The **second horizontal row** shows the small black hexagons moving across the centre of the larger hexagon from right to left also. • The **bottom horizontal row** shows a similar trend but this time across the bottom of the large hexagon. • **Solution:** The black hexagon will have to be on the bottom of the large hexagon, ruling out 1, 2, 3, 4, and 6. The pattern is to move right across the hexagon, **so the answer must be 8.** • Please look at the next puzzle. Look carefully at the eight shapes and see if you can work out the pattern like we did in the last question. Look along the rows and down the columns and see if you can find the pattern. • What shape should be in the space? • Please draw the shape. • Does it need anything else? **One student to explain answer. This done in order so all students have the opportunity to participate.** • **REPEAT** The section above for the next four puzzles.	**A-2-N** **From set 4** **LPAD** **Presenter provides all information to produce the solution. Students asked to follow carefully but save their questions** **B-1-1** **Set 4** **LPAD** **Student input now invited** **B-2-1** **B-5-1** **B-10-1** **B-3-1** **Set 4** **LPAD**

5. **Set D RSPM analogues: pattern 1**	**Presenter provides all information to produce the solution for the first puzzle in Set D.**
• You have a copy of the puzzle in front of you and there is one on the screen. Look carefully at the pattern and see if you can find any clues as to what should be in the empty space. There are some patterns if we look carefully across the rows and down the columns. • There are 8 objects or groups of objects in the pattern. The objects are **circles, triangles and squares.** • The top row of the pattern has all three types of objects present. • There are 2 triangles, 3 circles and 1 square. • All of the objects in this row have stripes on them. • The second horizontal row has the same three shapes in it, but there are 3 squares, 2 circles and 1 triangle. They are all empty. • The third horizontal row has 3 triangles, 1 circle and the missing shape. The first two shapes in this row are black. • If you look at the vertical columns we will see that there are triangles only in the 1st column (on the left), circles in the middle column and squares in the last column. • From the pattern the empty space should contain squares. There must be 2 of them and they should be black. • **Solution:** That leaves only one possible answer, solution 2. • Please look at the next puzzle. Look carefully at the three horizontal rows and three vertical columns. • Can you see any patterns in the columns and rows? • Why don't you draw what you think ought to be in the empty space. **One student to explain answer.** • **REPEAT** The section above for the next four puzzles.	**C-1->** **LPAD** **Set 4** **Stress group solving of puzzles** **Give solutions when you judge maximum understanding has been reached.** **Ensure that no student is made to feel they have failed** **These puzzles now require more steps to solve** **C-4->** **Set 4** **LPAD** **Student input now invited** **C-8->** **C-10->** **C-3->** **C-2->** **Set 4 LPAD**

6. **Set E RSPM analogues: pattern 1**	**Presenter provides all information to produce the solution for the first puzzle of Set E.** **D-1->** **LPAD** **Set 4**
• You have a copy of the puzzle in front of you and there is one on the screen. Look carefully at the puzzle and see if you can find any clues as to what should be in the missing space. There are some patterns, if we look carefully, across the rows and down the columns. • You can see that there are 8 shapes in the puzzle and one empty space. Each of the shapes is a hexagon (it has 6 sides) with some points attached to it. Some diagrams have the points outside and some have them inside. • Look at the top row. The first shape (on the left) has 5 outside points while the middle shape has 3 inside points. The last shape in the row has 2 outside points. • Could it be that the last shape is the result of the combination of the first 2 shapes? If the inside and outside points are considered to cancel each other then we can see that this is the case. • Now look at the vertical column on the left. If we add the first 2 together we get the bottom shape. • If we do the same with the middle row, the 1st two shapes combine to make the third shape. This is done by addition. • The middle vertical column is the same except that this time it is subtraction. • **Solution:** The shape in the empty space can be worked out by combining either the horizontal row or the vertical column that lead to it.	

7 **Set E RSPM analogues: pattern 2** • In this puzzle there are two parts to each shape. That is a solid part and then a dotted or lined background. • If we look down the vertical column on the left it is clear that the two solid parts of the top two shapes combine to produce the solid part of the bottom shape. The same applies to the next column. • We can now work out the solid part of the empty space. Let's draw it in. • If we look at the horizontal rows the background of the last shapes in the row is a combination of the backgrounds of the first two shapes. Let's draw it. • **Solution:** If we combine the background of the horizontal row and the solid parts of the vertical column we will have our answer as 3. • Please look at the next puzzle. Look carefully at the three horizontal rows and three vertical columns. • Can you see any patterns in the columns and rows? • Why don't you draw what you think ought to be in the empty space. **One student to explain answer.** • **REPEAT** The section above for the next four puzzles.	**E-1-π** **LPAD** **Set 4** **Show** **Show** **Student input now invited** **D-4->** **E-3-π** **D-10->** **LPAD** **Set 4**

Appendix 5.5: Parent, Student and Teacher Semi-Structured Interviews Used in the Case Studies

***STUDENT NAME:

**PARENT INTERVIEW, DATE OF INTERVIEW:

*PARENT NAME(S):

1. i. What can you remember about ..... first year of school?
   ii. Do you think that ..... is bright or clever? What sort of things make you think that?
2. Do you think that ..... has the same chance to do well at school as every other child in the class?
3. If you had the opportunity to change things in ... school, what would you change to make things better for your child?
4. Do you think that ... is doing as well as possible at school?
5. Do you think that ... will do well at primary school (academically)?

*6. i. Do you think ... will complete year 12? Do you expect that he / she will go to university or TAFE?
   ii. Do you expect ... to get a job when they finish their education? What might it be?

*7. Do you think that homework is important?

8. i. Does ... do much homework at home?
   ii. Does ... attend homework centre or receive any other outside help with schoolwork?
   iii. What is ... attendance record at school?

*9. If ... does well in school do you think that it will improve their chances of having a good (employment) career?

10. i. Do you think that ... will have to make some sacrifices to succeed in school (such as leisure time, other events)?
    ii. Will you have to make sacrifices?

11. Have you been involved in any school activities over the years?

*12. i. What do you like about being Aboriginal (proud)?
    ii. Do you encourage ... to be proud of being Aboriginal? How?

13. i. Do you belong to any Aboriginal bodies such as ASSPA?
    ii. Do you think that Aboriginal landrights are important? (Mabo)

***STUDENT NAME:

**STUDENT INTERVIEW, DATE OF INTERVIEW:

*TEACHER'S NAME:

1. i. What can you remember about your first year of school?
   ii. How do you feel about school now?
2. i. What things do you like about school?
   ii. What things don't you like about school?
3. Do you think you have as much chance as anyone else of doing your best at school?
4. What would you change at school to help you do better?
5. i. Do you think that it is a good idea to have an Aboriginal education assistant in your school?
   ii. In what ways do they help you most?
6. Have you had any teachers who really did a lot to help you personally? That is, did they treat you as special?

*7. i. What would you like to do when you leave school?
   ii. What school qualifications will you need for this?
   iii. Will this require much work, like homework or tests?

8. Do you intend to go on to year 11 and 12 (the higher school certificate)?

*9. What Aboriginal people do you look up to and would like to be like?

10. i. What do you like about being Aboriginal?
    ii. Is there anything that you don't like about being Aboriginal?
    iii. Are you proud to be Aboriginal?
11. i. What do you know about the way your people lived before the arrival of Captain Cook?
    ii. Do you know any of your people's language?
    iii. What is the name of your country (Aboriginal)?
12. What do you know about land rights?

*13. i. Do you think that you efforts at school will bring you rewards?
    ii. How important is it to do well at school?

14. What do your parents to you when you do well at school?
15. Are you prepared to make sacrifices, like watching less TV or going with your friends, so you can do well in school?

*16. Do your parents think you are bright or clever?

17. i. Do you do any school work (homework) at home?
    ii. Do you think that homework is important?

18. i. Do your parents or other relatives help you with homework?
    ii. Do they ask you about homework?
19. Do you have somewhere that you can do homework and not be disturbed?

***STUDENT NAME:

**TEACHER INTERVIEW, DATE OF INTERVIEW:

*TEACHER'S NAME:

1. i. Do you think that ... is working to their academic potential?
   ii. What do you consider their potential to be?
2. How do you rate ... academically, compared to the rest of the class?
3. What do you consider to be ... major strengths and weaknesses?
   i. Academically
   ii. As a person
4. If you were to provide one suggestion to improve ... academic performance. What would it be (home and school)?
5. How do you rate the support ... gets from home?
6. i. Do you know the parents personally?
   ii. What is your relationship with the parents?
7. i. Does ... complete their homework?
   ii. To what standard?
8. Are there other things that the school could do to improve the education outcomes for .... ?
9. i. How does ... fit into the class environment?
   ii. Do you think ... is fully accepted by the other children?
   iii. Do you think ... is proud to be Aboriginal?
10. How do you get on with .... ?
11. Do you think that the school's AEA is important in ... education?
12. What do you think the long term academic outlook for ... is?

Appendix 5.6: Permission Notes

UNE
The University of
NEW ENGLAND

School of Curriculum Studies
Armidale, NSW 2351 Australia
Telephone (02) 6773 5081 / 6773 5077 Facsimile (02) 6773 5078
email: CurricSt@metz.une.edu.au

Identifying High Academic Potential in Aboriginal Students

CONSENT FORM

I ..... (parent/guardian print name) have read the information letter and any questions I have asked have been answered to my satisfaction. I agree to allow my child to participate in this activity, knowing that my child may drop out of the study at any time. I agree that information gathered for this study may be published, provided my child's name or the schools name is not used.

Signed

.....
Parent/Guardian

Should you have any complaints concerning the manner in which this research is conducted, please contact the University of New Englands Ethics Committee at the following address:

The Secretary
Human Research Ethics Committee
Research Services
University of New England
Armidale, 2351
Phone (02) [redacted] FAX [redacted]

Study Co-ordinator
Graham Chaffey

[redacted]

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The University of
NEW ENGLAND

School of Curriculum Studies
Armidale, NSW 2351 Australia
Telephone (02) 6773 5081 / 6773 5077 Facsimile (02) 6773 5078
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Dear [redacted],

I am writing this letter seeking your permission to conduct research in your school. The research is part of my PhD studies. The thesis is titled:

The role of dynamic assessment in identifying high academic potential in Aboriginal students.

As the title suggests, the main aim of this study is to find a culturally appropriate method of identifying high academic potential in Aboriginal children. It is hoped that previously unidentified academic potential will be unearthed using this procedure.

What does it involve for your school?

- I will need to work with your year 3,4 and 5 Aboriginal students.

- I will visit your school at mutually agreeable times to carry out the following

1. Give the children a culturally unbiased test of general intelligence (Raven's Standard Progressive Matrices). This will involve a completion time of approximately 30 minutes (group administration).

2. Administer assessments of Locus of Control and Self Concept. Each will require approximately 20 minutes administration time (group administration).

3. Some of your children (who are in the experimental group) will undergo two half hour intervention sessions (in small groups).

4. 4 out of the 60 participants will be asked to participate in a short (20 minute) interview (in close proximity to an appropriate person).

I estimate that the maximum time requirement for any student will be 5 hours spread over 3 school days.

• Confidentiality

All data collected will be stored using code names for both students and schools so that there is no possibility of linking data to individuals or schools.

• A Cultural Awareness of and Ability to work with Aboriginal People

During 1998 I have worked closely with the Aboriginal community while co-ordinator of the **Anaiwan Enrichment Project,** which is a Department of Education and Training program designed to identify and fast track Aboriginal students who exhibit talent or potential across a broad range of fields. I was also involved as a consultant on the Catholic Schools Office project for gifted and talented Aboriginal students during 1998 These experiences, plus many years of working with Aboriginal people, has made me acutely aware of the need to work closely with the Aboriginal community. During 1998 I have demonstrated the ability and knowledge to work successfully with Aboriginal students and the wider Aboriginal community.

• This research project has been approved by the University of New England Ethics Committee, the Catholic Schools Office and the Department of Education and Training.

I believe that this project has immense potential to help identify emerging academic talent in Aboriginal students and as such is an extremely worthwhile project. I would be pleased to answer any questions that you may have with respect to any aspect of the study.

Study Co-ordinator:

Graham Chaffey
School of Curriculum Studies
University of New England
Armidale, 2351
[redacted]

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The University of
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School of Curriculum Studies
Armidale, NSW 2351 Australia
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Dear Madam/Sir,

I am writing this letter seeking permission for your son or daughter to take part in a study that I am carrying out as part of my university program.

The study is titled:

Identifying High Academic Potential in Aboriginal Children
The study involves developing a new, culturally good method of finding Aboriginal children who have very good academic natural ability.

Methods
Your child will be asked to complete two simple personality indicators, a culturally suitable general ability test and take part in a short (1 hour) teaching process. The whole event will take place over a time period of about 6 weeks.

All activities will take place in school time and under school supervision.

STUDY EVENT	TIME
Personality indicators	**About a half an hour each**
Culturally appropriate general ability test	**About forty minutes**
Teaching exercise	**About one hour**

All results will be kept totally secret. Your child will be given a code number to make sure that this happens.

The Anaiwan Project:
In 1998 I ran the Anaiwan Project in which many local Aboriginal children took part. This program helped these children to improve their talents and build confidence. I have worked with Aboriginal children for many years and have shown that I can successfully work with the Aboriginal community.

Participation:
Please note that your child is under no pressure to take part in this project and should do so only if you think that it is worth doing. I will explain to your child what the project is about before we begin.

Study Co-ordinator:

Graham Chaffey
School of Curriculum Studies
University of New England
Armidale, 2351
(02) [redacted](w)

Study Supervisor:

Stan Bailey
School of Curriculum Studies
University of New England
Armidale, 2351
(02) 6[redacted]

If you have any questions about the program, please ring me on **67** [redacted](w).

Yours sincerely

[redacted]

Appendix 5.7: Sample of Interview Data Presented in NUD•IST Format

+++
+++++++++++++++++++++++++
+++ ON-LINE DOCUMENT:
**STUDENT NAME:
**GROUP: Teacher
**SCHOOL: M
**SEX: Female
**GRADE: 4
**TEACHER INTERVIEW 1, DATE OF INTERVIEW:
**TEACHER'S NAME:
**TEACHERS SEX: Female
+++
+++++++++++++++++++++++++
[: 1 - 67]
***GRAHAM: DO YOU THINK THAT .... IS WORKING TO HER ACADEMIC POTENTIAL?
* Name: Not completely. She sometimes looks for more attention to do the work. To have someone do the work with her and yet I know that she could do it on her own. I think sometimes it just might be attention. Getting some attention in the classroom because she is one of the more capable children and is able to work more independently so she is not a kid that requires a lot of attention and so I think that might be what it is with her but she could certainly work a bit more on her own.
*GRAHAM: COULD SHE WORK AT A HIGHER LEVEL DO YOU THINK?
*: She seems to be coping with what she is doing at the moment. I know earlier in the year because it was the first time I had fourth grade that the work that I was giving her was too easy but now that we have settled into a pattern and she has been here all year that it has worked out that she is able to work at the level of work that I am giving her.
**GRAHAM: WHAT DO YOU CONSIDER THEIR POTENTIAL TO BE?
*: She enjoys READING she seems to do quite well with the literacy side of it. She enjoys story writing and she does quite well with that. Her spelling is really good. I'm actually having to use fifth and sixth class spelling lists to accommodate her needs.
*GRAHAM: DID SHE DO THE BASIC SKILLS THIS YEAR?
*: No she did that last year. She did third grade last year. I'm not sure how she did with that I think she did okay according to her Mum.

Appendix 6.1: Data Collection Case Notes

Student details

Code	D.O.B	Class	Behaviour / attitudes	Intervention
1,9,I	4/6/90	3	J generally lacked concentration. He rushed almost all tasks without giving the more difficult tasks the attention they needed in order to reach the desired outcomes. This behaviour did not improve greatly even after the interventions. J gave up early in the pretest but persevered in the posttest.	yes
2,9,I	13/3/91	3	K was quiet throughout the program. Her main problem was absenteeism, missing one intervention session and the start of the posttest. K concentrated well in all aspects of the program.	yes
3,9,I	30/5/90	4	L displayed very poor concentration in the beginning of the program. This aspect improved as time went on, although he struggled with the material throughout.	yes
4,9,I	4/1/89	4	D was a real problem throughout the initial sessions of the program. He was asked to leave at one stage during intervention I but he insisted on staying. It was at this point that he began trying and listening to instructions and working out solutions to the intervention problems. **AS A GROUP** This group was extremely disruptive and unfocused in the early stages. The boys were very much this way, while K was very quiet. The boys all seemed to lack self confidence and perseverence with D the main offender. They improved dramatically in this regard as the program progressed. By programs end they would be waiting for me to arrive. K missed the first intervention but did it out of order on another day. **Pretest** This was poorly attempted by all but K. The boys were all unsettled and lacked concentration. **The intervention** sessions were excellent after a slow start. When success constantly occurred the students became more confident and tried harder to seek solutions. On the day of the second intervention the students were waiting for me at the school entrance. **Posttest** This was much better with all working very well compared to the pretest. K was late. **Far posttest** Once again well attempted.	yes
1,1,A	6/4/88	5	L was a confident boy who concentrated well. L was always looking to have a joke. An excellent athlete.	no
2,1,A	29/6/89	4	G was noisy at times and lacked concentration.	no
3,1,A	5/7/89	4	N was a very talkative child who rushed everything. She gave up quickly in the early stages	yes

4,1,A	28/3/89	5	A was a quiet, conscientious student. She concentrated well at all times.	yes
5,1,A	7/11/90	3	J was very quiet and worked steadily	no
6,1,A	18/9/88	5	K was very quiet seemed to try very hard.	yes
7,1,A	11/9/90	3	B lacked concentration in the class situation. He had a great deal of trouble keeping up with the rest of the group	no
8,1,A	12/4/88	5	M was very hard to get to concentrate but once he settled in he concentrated well. M rushed much of his work. On the day of the far posttest M got into major trouble in the playground. **AS A GROUP** This group was a real pleasure to work with. While some individuals (B and G) were unfocused at times the group was very co-operative and generally tried their hardest. The **intervention** session was excellent. **The pretest** was well attempted by all students. They seemed to concentrate through most of the assessments. The **posttest** was well attempted but the far posttest coincided with the basic skills tests (the day before) and a visit by the Bishop (that day). The children were noticably irritable and distracted. All attended the **intervention.** N was very impulsive in her answering of questions in both the pretest and intervention. This was addressed in the intervention. N worked noticeably slower and seemed to persevere longer at questions longer in the posttest. **Far posttest** was well attempted once again, with all present again. Unfortunately Nina seemed to back to her old habit of rushing her questions. **NOTE: The control group was subsequently given the intervention and tested again.**	yes
1,4,D	22/7/90	3	R is a moody boy who was easily distracted by those around him and the conditions. He was one of the boys who travelled for 8 hours the day before the posttest and was obviously effected. Retested on the RSPM for the posttest.	yes
2,4,D	20/7/90	3	K was very quiet. He has a medical condition that meant he had to leave the sessions occasionally. K was distracted easily as were many of this group. K clearly was effected by the long trip prior to the posttest. Retested for RSPM.	yes
3,4,D	20/5/89	5	W was a leader but too often in a negative sense. He tried hard most of the time but would then distract other members of the group. Was very tired before the posttest after a long trip. Retested on the RSPM for posttest	yes
4,4,D	19/11/88	5	E obviously has significant learning difficulties and had extreme difficulty participating in the pretests. He was subsequently suspended from school and thus has dropped out of the study.	no
5,5,D	25/5/90	4	A was a pleasant but very chatty and attention seeking in her behaviour. She did not concentrate well initially but improved greatly as her confidence improved. Like many in the group tried out the system often.	Yes

6,4,D	28/8/88	5	P was very disruptive at times and refused to try at others. I had to remove him from the Intervention Group due to his disruption to the group. Despite this I suspect a hidden intelligence. He was also very likeable despite his behavioural problems.. Did he try ???	No
7,4,D	5/5/89	5	T was part of the behavioural problem group. His behaviour was not a real problem but he responded to others in disrupting the focus of the group.	no
8,4,D	11/10/88	5	B was a well balanced youngster. He tried hard at all the tasks given.	yes
9,4,D	8/7/89	4	S was very quiet. She seemed to do her best.	no
10,4,D	12/4/90	3	R was a noisy individual. She had difficulty following instructions at times. Easily led. Seemed to try hard once she started.	no
11,4,D	8/8/90	3	J was a pleasant, quiet individual. She tried hard but appeared to lack confidence.	yes
12,4,D	29/11/89	4	J was an immature child who was the target of teasing by some of the other boys. He lacked confidence but seemed to try when asked.	no
13,4,D	9/4/88	5	L was a quiet boy who tried hard. Missed posttest.	yes
14,4,D	21/2/91	3	M was an immature boy who seemed to try hard. He was easily led at times. Last finished in each RSPM. In the far posttest he failed to finish the RSPM and left out a significant number of questions in the SDQI. He complained of being hungry.	no
15,4,D	11/9/90	3	R struggled with the intervention. He found it hard. Easily distracted.	yes
			AS A GROUP As a group they were very hard to motivate to perform to the best of their ability. The presence of a disruptive group plus the size of the group contributed to the problem. They became more receptive to the program as we progressed. Once the intervention group began to experience constant success their focus and co-operation improved dramatically. P had to be removed from the intervention group as he was badly disrupting the group and not trying. The posttest was very difficult with three of the intervention group boys obviously under performing due to extreme fatigue brought about by a long bus trip and a losing game of football. Further it was the second last day of term and pouring rain. These boys were given the RSPM again several days later. The far posttest saw 6 students absent. The generally lack-lustre group dynamics was again evident. M was a problem in that he failed to complete several tasks. The remaining students will be assessed as soon as possible. All attended the intervention. The absent people were given the test in the next week. The 6 absent students in the first attempt of the far posttest were present for the second attempt one week later. The group dynamics were excellent with all students working very well.	
1,2,B	1/6/91	3	C was a very attentive and interested child. She concentrated well. No problems	yes

2,2,B	15/8/90	3	B was a very friendly character who concentrated well. No problems	yes
3,2,B	25/3/90	4	J was a very friendly girl who concentrated very well. No problems	no
4,2,B	27/3/90	4	P was a bright boy who concentrated well. No problems	no
5,2,B	4/6/90	4	R tried hard but found much of the intervention difficult. No problems	yes
6,2,B	5/2/90	4	T tried hard but struggled with much of the program. No problems.	no
7,2,B	13/3/90	4	S was an exuberant girl who lacked academic confidence. She became very excited when succeeding in the intervention.	yes
8,2,B	29/3/90	4	N concentrated well. No problems	no
9,2,B	31/1/91	3	N	no
			AS A GROUP This was an excellent group to work with. They all tried hard and the group dynamics was excellent once they had accepted me. This took only one session. The intervention session was very successful. The posttest and far posttests were very positively done. P missed the intervention.	
1,5,E	18/6/89	5	B is a lively lad who worked well, although he was easily disrupted by the group trouble makers.	no
2,5,E	14/3/88	5	A is a quiet, conscientious boy who tried hard all the time.	no
3,5,E	20/11/89	4	C is a child who is easily led and is often unsettled. He seemed to work well in the pre and posttest assessments although the whole group seemed unsettled in the posttest. Trouble maker at times.	no
4,5,E	13/2/89	5	T is obviously a leader and unfortunately of a negative type most times, although in the posttest he did seem to do his best. In the pretest RSPM he did give up in the middle of set C. In far posttest he was asked to leave after the RSPM due to his refusal to follow instructions. A totally disruptive influence.	no
5,5,E	25/8/88	5	T is a real problem in the group and caused most of the problems in the group. He did seem to work well once into the assessments.	no
6,5,E	10/8/88	5	C is a steady girl who was very co-operative and tried hard. No problems.	yes
7,5,E	20/7/90	3	K is a quiet, shy type. She tried hard at everything.	yes
8,5,E	23/5/91	3	C is a quiet boy with vision problems. He was led a little by the distracters but all in all did his best.	yes
9,5,E	6/9/90	3	B is a surely, quiet boy who was reluctant to participate at times but seemed much keener at other times. He tended to be an isolate much of the time.	no
10,5,E	17/2/90	3	S is a lively boy who seemed to try hard but did not persist well. He was pleasant and well behaved.	yes
11,5,E	3/1/91	4	J is a quiet, pleasant boy who worked well at all tasks.	yes

12,5,E	16/2/90	3	B is a boy who is easily led and became a problem when the other boys became disruptive. During far posttest session he had a 'blow up' during a game break.	no
13,5,E	27/2/89	4	J is a very quiet girl who worked well at all times.	yes
14,5,E	8/5/89	5	E is a child who is quite mature. She is pleasant and tries hard at all tasks.	yes
15,5,E	10/4/91	3	S is a very quiet girl who worked well and concentrated very well.	no
			AS A GROUP The boys had a big group of disruptive individuals. The girls were uniformly quiet and well behaved. The boys mainly responsible for the poor concentration and behaviour were T, B and T. The small intervention groups were excellent as all three disrupters were not in these groups. T was abent on intervention day. The intervention and posttest was done at the same time that practice tests for the basic skills tests were on causing obvious unsettling with most of the children. Some teachers were putting pressure on students to stay in class. Students 1 and 2 missed the posttest but did it a week later, but only the RSPM. During far posttest session T was obviously out of sorts as he came into the group. He constantly refused to follow instructions and was asked to leave after the RSPM. He rushed that assessment. The rest of the group worked very well through the day.	
1,6,F	18/3/91	3	C is a very quiet but pleasant child. She is an outstanding athlete. Worked well in pretest.	yes
2,6,F	24/11/90	3	L is a quiet, co-operative child. Worked well in pretest.	no
3,6,F	18/4/90	3	J is a very quiet boy who worked well. Was not involved with the stirrers.	yes
4,6,F	6/2/91	3	T is a quiet child who worked well in the pretest. T missed the posttest due to illness. She did the RSPM a few days later under school supervision.	yes
5,6,F	10/7/89	4	A is a big, arkward girl who was easily distracted. Worked steadily in pretest.	no
6,6,F	4/1/89	4	R was a borderline behavioural problem. He became much better after the removal of the two disruptive students. Worked steadily in pretest.	no
7,6,F	20/8/89	4	M was badly effected by the problem boys. He was involved in a major behavioural problem at recess (between sessions). Once the two boys were removed from the group he settled down considerably. Was surely in session 2 after his discipline problems.	yes
8,6,F	14/10/88	5	K is a very quiet, serious girl who worked very well. She was last finished in the RSPM.	no
9,6,F	21/8/89	4	A is a friendly, active girl who tried worked steadily. She may have a hearing problem??? Worked steadily in the pretest.	no

			AS A GROUP **The group dynamics initially was very poor** with two boys, R and P constantly ignoring instructions and generally being disruptive. At the end of session 1 I excluded them from the study as the entire group was in danger of becoming non functional. Once these two were removed the group transformed into a keen positive group. **The intervention sessions were first class.** The actual intervention group began slowly with A and M showing poor concentration and distracting behaviour. As the program developed they both became better and better as they succeeded using the processes given, though both took a little pushing to break through. **The placebo intervention** was very positive. R and C absent from the placebo intervention. At the **posttest** everyone worked well. **The far posttest** was done with great diligence by all students.	
1,8,H	12/1/90		A quiet, attentive child who appeared to concentrate well throughout the pretest.	no
2,8,H	22/2/90		J is a very hyperactive child who was seeking attention constantly. He gave up quickly in the RSPM.	yes
3,8,H	3/8/90		Y is a quiet child. No obvious problems in the pretest.	no
4,8,H	26/7/89	4	C is an outgoing attention seeking child. She worked steadily in the pretest.	yes
5,8,H	1/5/91		C is a very quiet, serious child who tried very hard.	yes
6,8,H	25/3/90		B is shy but tried hard. He seemed to struggle at times.	no
7,8,H	26/9/90		D found it hard to concentrate at times and gave up several times before completing the RSPM.	yes
8,8,H	2/10/90		J is new to the school, but appears to be a confident girl. She worked steadily throughout.	no
9,8,H	31/1/91		M arrived late and missed the IAR. She appeared to struggle at times and had the tendency to give up.	no

			AS A GROUP The group dynamics were interestingly different than with the other schools. There was a willingness to give up with several individuals in pretest. **The intervention group** were very slow to pick up the momentum that has been a feature of most other sessions. The fact that I had a severe bout of the flu at the time may have been a contributing factor here. D was a big improver here. **The placebo intervention** was very positive. **The posttest** was well attempted by all. D was away initially after being in trouble the previous day. He did the assessments 2 days later. The tendency to give up was much less noticeable. D did not complete his assessment due to chicken pox. The **Far posttest** was conducted in good conditions, however J rushed through his RSPM and COULD NOT HAVE SERIOUSLY attempted the test. I will get him to redo it if possible. D was very slow and reluctant but improved as he went on. He completed set E later in the week as he was very slow and concentrated only in patches. All others seemed to try hard.	
10,8,H	10/7/89			
11,8,H	30/3/90			
1,10,J	8/11/89	3	T is a quiet boy who worked solidly, although initially distracted by E	no
2,10,J	23/9/90	3	M worked well and presented no problems	yes
3,10,J	6/5/90	4		yes
4,10,J	21/11/89	4	P concentrated well	no
5,10,J			L has a real concentration problem, but seemed to do his best	no
6,10,J	28/3/89	5		yes
7,10,J	28/5/90	4		yes
8,10,J	26/11/89	4	N concentrated well	yes
9,10,J	3/10/90	3		no
10,10,J	11/12/89	4		yes
11,10,J	16/8/89	4		yes
12,10,J	5/8/89	4		no
13,10,J	13/8/88	5		yes
14,10,J	6/4/91	3	B was really slow on the RSPM and did not finish. She was to finish it in class later	no
15,10,J	13/11/90	3	As above	no
			These boys began the program but found it too demanding and withdrew when given the opportunity	

			AS A GROUP **Pretest** The group dynamics were generally excellent. The room used was a little bit small for the 17 who started. Two boys found the process too demanding and quickly took the option to leave. The problem was not behaviour but simply their inability to handle the tasks. All of the children seemed to try very hard. The group in general was very positive. **The Intervention** Group 1 consisted of M, T, A and N. This group were outstanding with rapid progress and excellent behaviour. Over the two hour intervention they barely faltered in their concentration and effort. They progressed as well as any group in the study. The second intervention group (B, S, K and S1) performed well but not to the level of the the first group. During this intervention **S** was continually helped (unhelpfully!!) mainly by S1. She could not give an answer without interference despite constant comments by myself to let her do it herself.The control group (P, L, S, T, T1, B and J) worked well. **The posttest** was attended by all but T and T1. They will complete the assessments when they return to school. The assessments were generally well attempted. All seemed to try hard. A much more careful approach was taken by K in the assessment as opposed to the haste she displayed in the pretest RSPM. The 2 absentees completed the posttest the next day under school supervision. **Far posttest** was was completed by all except B who has left the school. The students appeared to try hard, although K rushed and was first finished, despite comments such as "take your time." T and J became bogged down by the end of set B and appeared to guess most after this point.	

Appendix 6.2: Total RSPM Raw Score Data for Intervention and Control Groups

* Gain from pretest to posttest

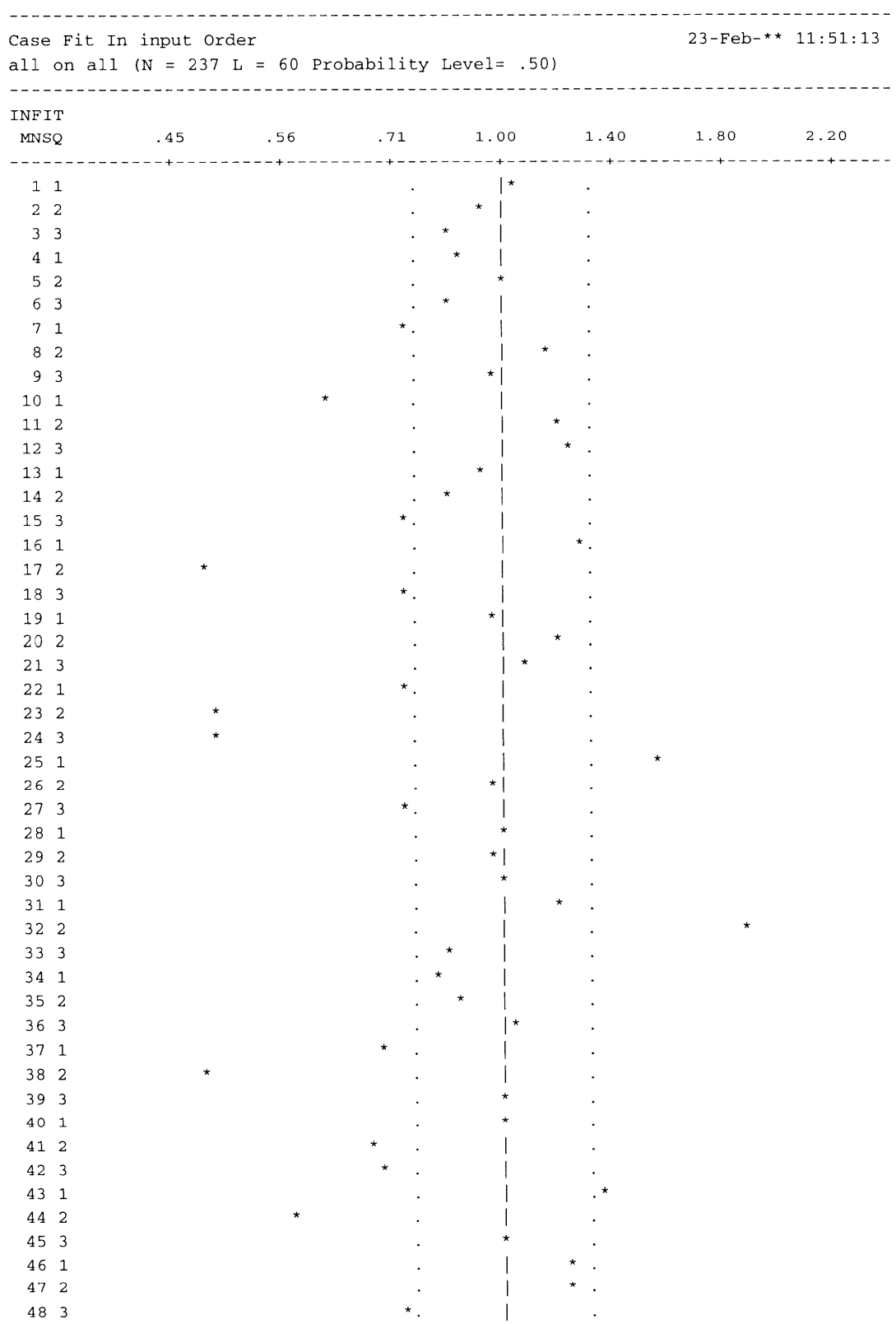
** Gain from pretest to far posttest

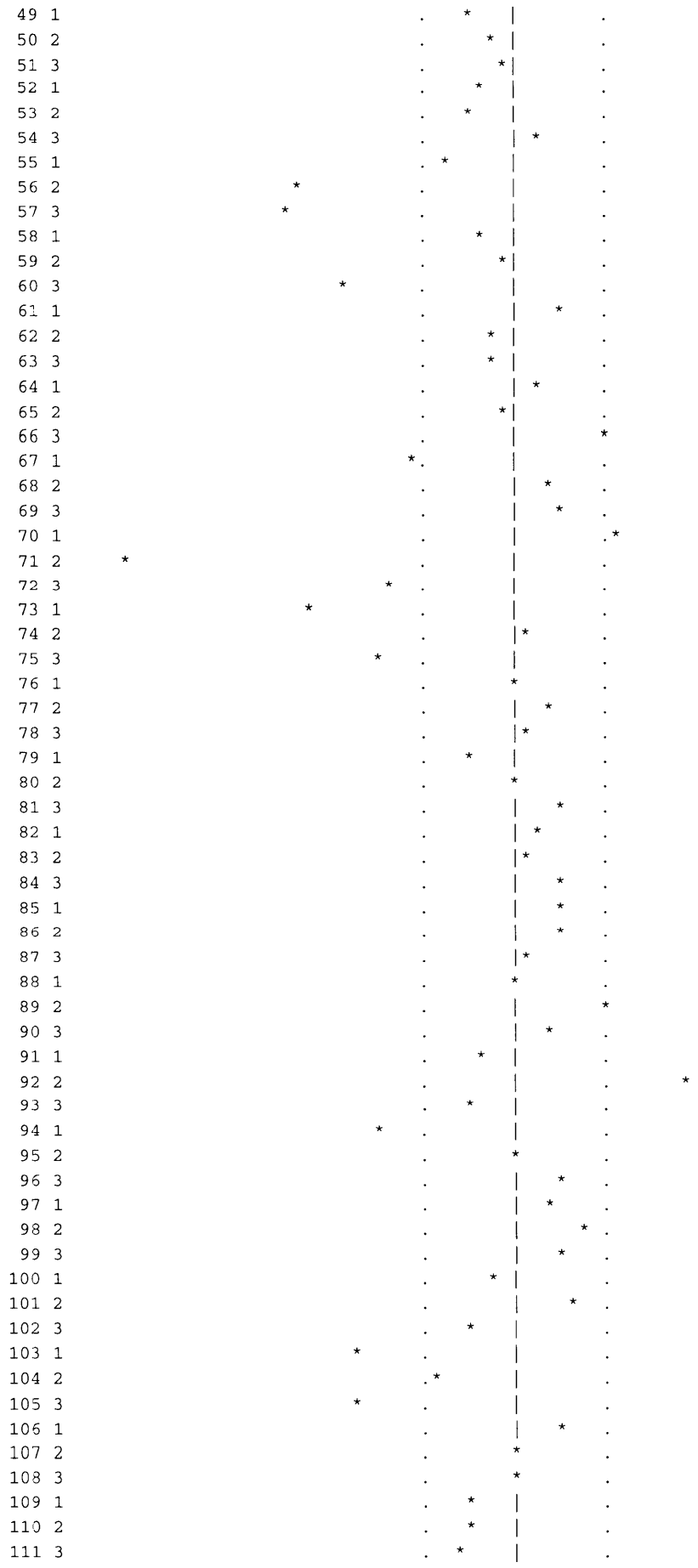
			Intervention Group RSPM									
Student		Gr.	Pretest		Posttest		Gain1 *	Gain 2 * *	Far Posttest			
	yrs		raw	%ile	raw	%ile			raw	%ile		
1,9,I	8yr9	3	25	24	34	50	9	4	29	33		
2,9,I	8yr0	3	23	26	45	96	22	20	43	91		
3,9,I	8yr9	4	21	18	26	26	5	9	30	35		
4,9,I	8yr9	4	15	12	34	50	19	10	25	24		
3,1,A	9yr11	4	12	2	43	80	31	26	38	52		
4,1,A	10yr3	5	41	61	41	61	0	0	41	61		
6,1,A	10yr9	5	35	22	39	34	4	-1	34	19		
8,1,A	11yr2	5	34	19	43	60	9	0	34	19		
1,4,D	8yr11	3	21	18	44	91	23	15	36	58		
2,4,D	8yr11	3	26	26	43	88	17	10	36	58		
3,4,D	10yr1	5	32	29	41	69	9	3	35	39		
5,4,D	9yr1	4	32	43	41	81	9	10	42	83		
8,4,D	10yr8	5	39	52	44	76	5	3	42	65		
11,4,D	8yr10	3	17	15	27	28	10	19	36	58		
15,4,D	8yr9	3	14	10	20	17	6	10	24	22		
1,2,B	8yr0	3	35	58	43	91	8	10	45	96		
2,2,B	8yr10	3	43	88	39	73	-4	-2	41	81		
5,2,B	9yr0	4	25	24	27	28	2	7	32	43		
7,2,B	9yr3	4	17	5	21	11	4	4	21	11		
6,5,E	10yr10	5	25	6	36	25	11	15	40	39		
7,5,E	9yr0	4	39	73	41	81	2	2	41	81		
8,5,E	8yr1	3	27	34	27	34	0	7	34	53		
10,5,E	9yr3	3	14	3	34	37	20	17	31	25		
11,5,E	8yr4	4	35	58	39	75	4	7	42	88		
13,5,E	10yr3	4	24	8	33	26	9	7	31	19		
14,5,E	10yr1	5	36	42	43	80	7	8	44	85		
3,6,F	9yr4	3	45	86	50	97	5	2	47	93		
4,6,F	8yr2	3	29	37	33	47	4	2	31	41		
7,6,F	9yr11	4	21	11	32	29	11	16	37	46		
9,6,F	9yr11	4	16	7	27	15	11	18	34	35		
2.8,H	9yr6	4	21	11	30	23	9	-1	20	10		
4,8,H	10yr1	5	36	42	42	75	6	10	46	91		

5,8,H	8yr4	3	32	45	40	80	8	5	37	66		
2,10,J	9yr2	4	41	81	45	93	4	2	43	88		
3,10,J	9yr5	4	32	28	44	81	12	10	42	72		
6,10,J	10yr7	5	16	4	15	2	-1	-5	11	1		
7,10,J	9yr5	4	35	41	42	72	7	10	45	86		
8,10,J	9yr11	5	26	15	38	52	12	6	32	29		
10,10,J	9yr11	5	30	24	41	69	11	11	41	69		
11,10,J	10yr3	5	22	7	21	6	-1	5	27	9		
13,10,J	11yr3	5	33	14	38	25	5	0	33	14		
	* Age at posttest		27.9		36.2				35.0			
			Pretest average		**Posttest average**				**Far posttest average**			
			Control Group RSPM									
1,1,A	11yr2	5	40	39	43	60	3	-1	39	34		
2,1,A	10yr0	4	36	42	42	75	6	1	37	46		
5,1,A	8yr7	3	27	34	39	75	12	10	37	66		
7,1,A	8yr9	3	18	16	15	14		2	20	17		
6,4,D	10yr10	5	22	5	34	19	12	14	36	25		
7,4,D	10yr1	5	30	24	41	69	11	5	35	39		
9,4,D	9yr11	4	12	2	11	1	-1	-1	11	1		
10,4,D	9yr2	3	27	28	30	35	3	5	32	43		
12,4,D	9yr7	4	33	32	35	41	2	0	33	32		
14,4,D	8yr4	3	13	11	10	2	-3	-4	9	1		
3,2,B	9yr3	4	26	16	24	14	-2	6	32	28		
4,2,B	9yr3	4	35	37	47	93	12	11	46	90		
6,2,B	9yr4	4	17	5	20	10	3	4	21	11		
8,2,B	8yr9	4	24	22	28	22	4	-2	22	20		
9,2,B	8yr5	3	35	58	36	62	1	5	40	80		
1,5,E	10yr1	5	35	39	36	42	1	3	38	52		
2,5,E	11yr4	5	28	7	30	8	2	5	33	14		
3,5,E	9yr8	4	26	15	26	15	0	2	28	19		
4,5,E	10yr5	5	31	19	38	48	7	9	40	57		
5,5,E	10yr7	5	22	7	23	7	1	8	30	16		
9,5,E	8yr10	3	26	26	33	46	7	8	34	50		
12,5,E	9yr5	3	27	18	29	21	2	1	28	19		
15,5,E	8yr3	3	38	71	41	85	3	6	44	94		
1,6,F	8yr5	3	13	11	15	14	2	1	14	12		
2,6,F	8yr9	3	24	22	33	46	9	6	30	35		
5,6,F	10yr1	4	27	15	34	35	7	7	34	35		
6,6,F	10yr7	4	28	12	28	12	0	1	29	14		
8,6,F	10yr10	5	48	85	42	54	-6	-2	46	77		
1,8,H	9yr8	5	39	55	37	46	-2	-3	36	43		
3,8,H	9yr1	4	15	12	12	5	-3	-4	10	2		
6,8,H	9yr5	4	21	11	18	7	-3	-2	19	8		
9,8,H	8yr7	3	23	26	22	25	-1	2	25	30		

1,10,J	10yr0	5	21	11	24	11	3	6	27	15		
4,10,J	10yr0	5	40	63	41	69	1	4	44	85		
5,10,J	11yr0	5	11	1	18	5	7	4	15	5		
9,10,J	9yr1	3	18	16	28	31	10	15	33	46		
12,10,J	10yr3	4	23	7	29	14	6	13	36	39		
15,10,J	9yr0	3	19	16	12	5	-7	-2	17	15		
			26.3		29.1				30			
			Pretest average		Posttest average				Far posttest average			

Appendix 6.3: RSPM Case Fit to the Rasch Model




49 1
50 2
51 3
52 1
53 2
54 3
55 1
56 2
57 3
58 1
59 2
60 3
61 1
62 2
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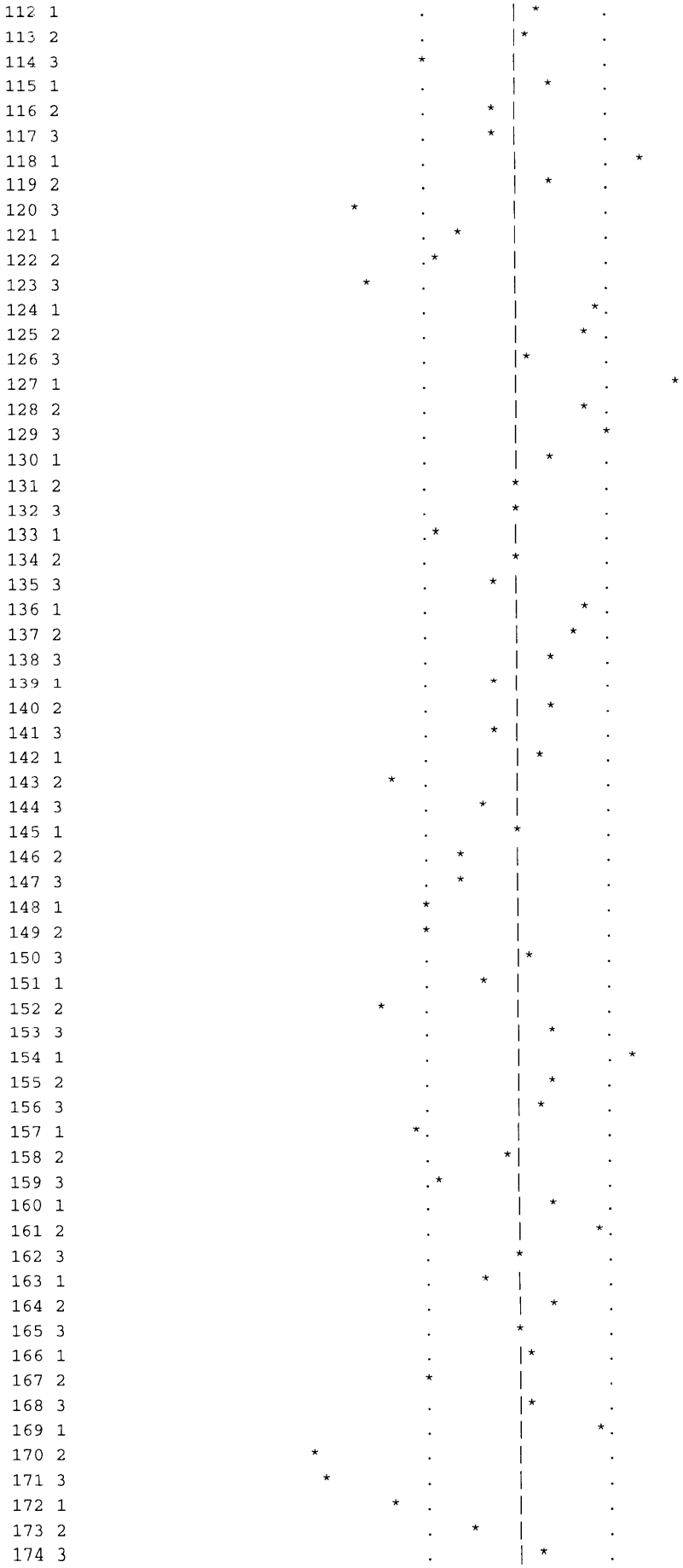
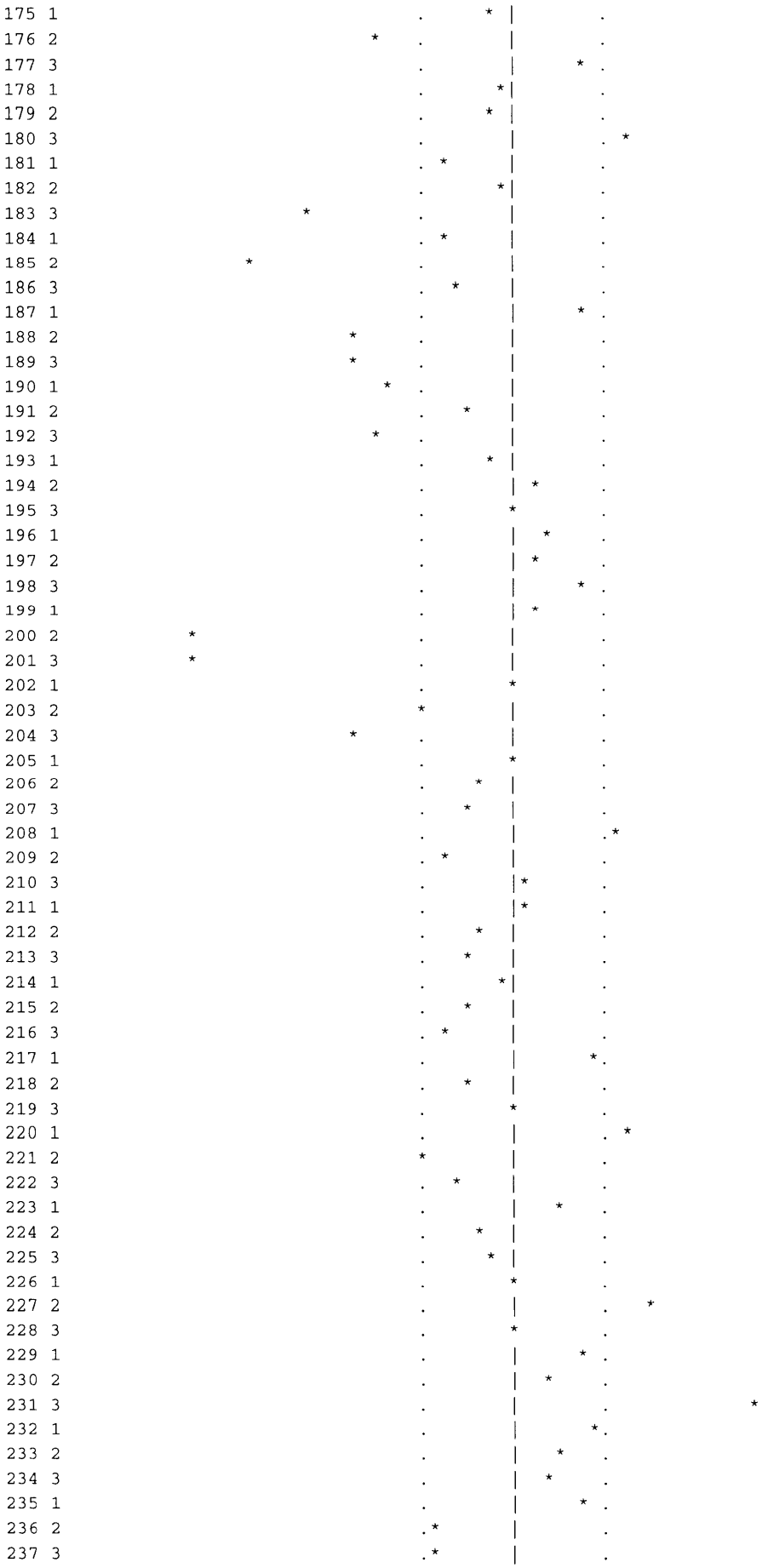
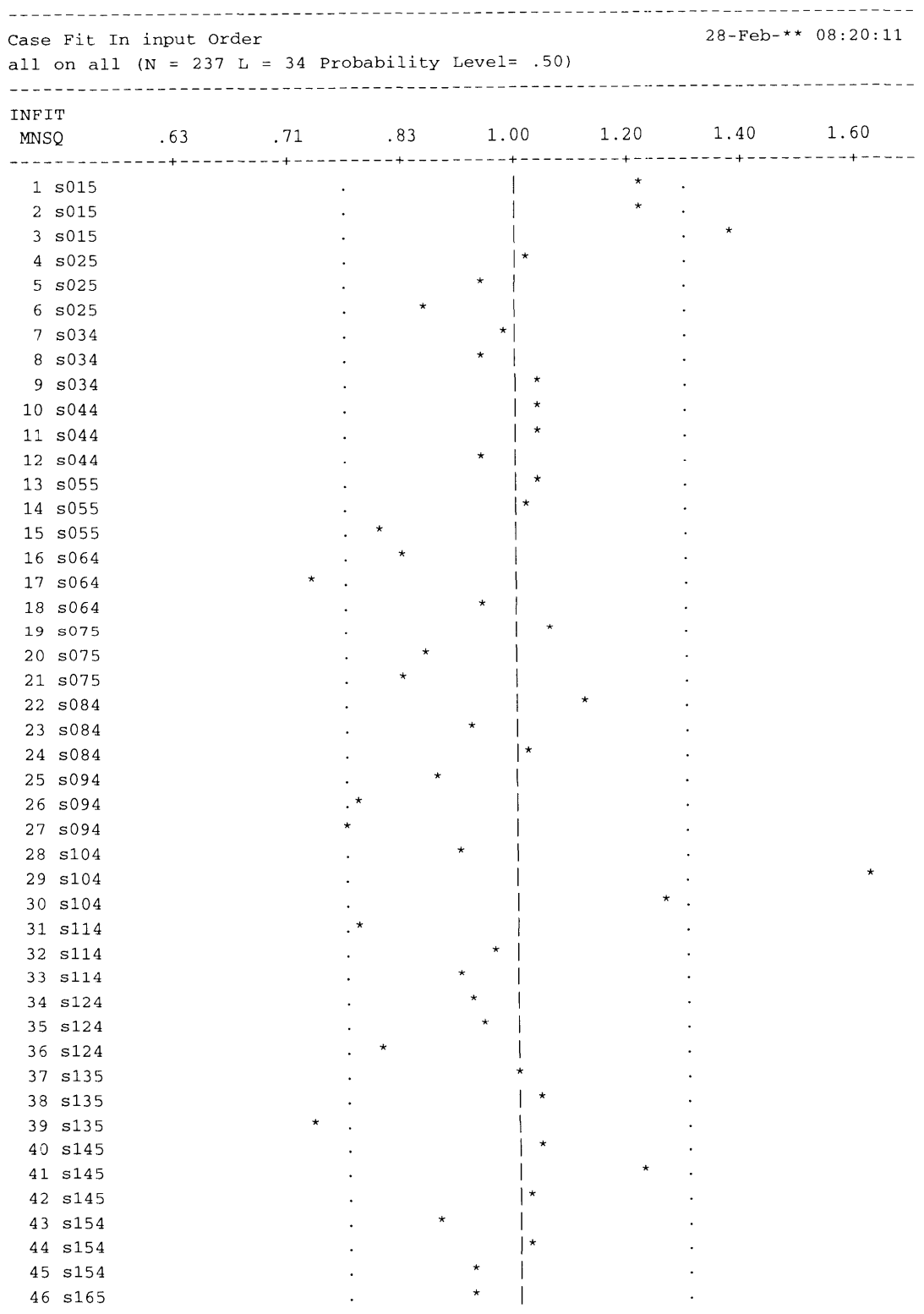
64 1
65 2
66 3
67 1
68 2
69 3
70 1
71 2
72 3
73 1
74 2
75 3
76 1
77 2
78 3
79 1
80 2
81 3
82 1
83 2
84 3
85 1
86 2
87 3
88 1
89 2
90 3
91 1
92 2
93 3
94 1
95 2
96 3
97 1
98 2
99 3
100 1
101 2
102 3
103 1
104 2
105 3
106 1
107 2
108 3
109 1
110 2
111 3

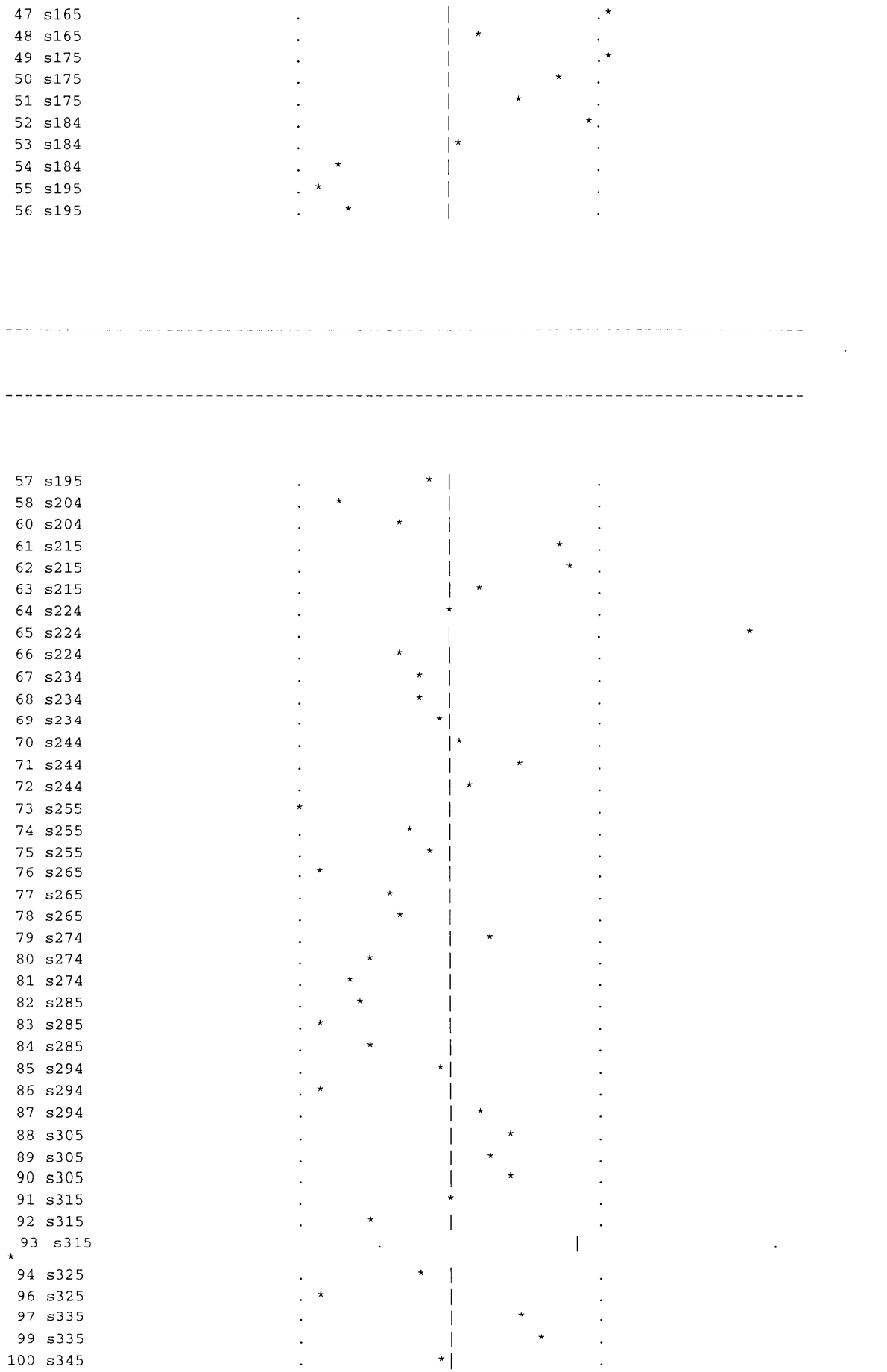

112 1
113 2
114 3
115 1
116 2
117 3
118 1
119 2
120 3
121 1
122 2
123 3
124 1
125 2
126 3
127 1
128 2
129 3
130 1
131 2
132 3
133 1
134 2
135 3
136 1
137 2
138 3
139 1
140 2
141 3
142 1
143 2
144 3
145 1
146 2
147 3
148 1
149 2
150 3
151 1
152 2
153 3
154 1
155 2
156 3
157 1
158 2
159 3
160 1
161 2
162 3
163 1
164 2
165 3
166 1
167 2
168 3
169 1
170 2
171 3
172 1
173 2
174 3



Appendix 6.4: IAR Case Fit to the Model

IAR Case Fit to the Model




47 s165
48 s165
49 s175
50 s175
51 s175
52 s184
53 s184
54 s184
55 s195
56 s195
57 s195
58 s204
60 s204
61 s215
62 s215
63 s215
64 s224
65 s224
66 s224
67 s234
68 s234
69 s234
70 s244
71 s244
72 s244
73 s255
74 s255
75 s255
76 s265
77 s265
78 s265
79 s274
80 s274
81 s274
82 s285
83 s285
84 s285
85 s294
86 s294
87 s294
88 s305
89 s305
90 s305
91 s315
92 s315
93 s315
94 s325
96 s325
97 s335
99 s335
100 s345

```
101 s345                    .              |      *        .
102 s345  *                 .              |               .
103 s355                    .              *               .
104 s355                    .              *               .
106 s365                    .    *         |               .
107 s365                    .        *     |               .
108 s365                    .              |               . *
109 s374                    .              |   *           .
110 s374                    .              *               .
111 s374                    .              |               .   *
112 s384                    .              |        *      .
113 s384                    .           *  |               .
114 s384                    .              |   *           .
115 s394                    .          *   |               .
116 s394                    .              |          *    .
================================================================================
                                                 *****Output Continues****
```

```
chaffey
--------------------------------------------------------------------------------
Case Fit In input Order                                    28-Feb-** 08:20:11
all on all (N = 237 L = 34 Probability Level= .50)
--------------------------------------------------------------------------------
INFIT
 MNSQ         .63        .71        .83       1.00       1.20       1.40       1.60
--------------+---------+---------+---------+---------+---------+---------+------
117 s394                    .              |               .   *
118 s405                    .       *      |               .
119 s404                    .            * |               .
120 s404                    .              *               .
121 s414                    .          *   |               .
122 s414                    .           *  |               .
123 s414                    .          *   |               .
124 s424                    .              |*              .
125 s424                    .              |               .*
126 s424                    . *            |               .
127 s435                    .              |          *    .
128 s435                    .             * |               .
129 s435                    .              |*              .
130 s444                    .        *     |               .
131 s444                    .              |       *       .
132 s444                    .        *     |               .
133 s454                    .            * |               .
134 s454                    .             * |              .
135 s454                    .              |   *           .
136 s465                    .              |  *            .
137 s465                    .              |   *           .
138 s465                    .*             |               .
139 s475                    .              |*              .
140 s475                    .             * |              .
141 s475                    .              *|              .
142 s485                    .              |   *           .
143 s485                    .              |  *            .
144 s485                    .    *         |               .
145 s494                    .              *|              .
146 s494                    .         *    |               .
147 s494                    .          *   |               .
148 s504                   * .             |               .
150 s504                    .              |     *         .
151 s515                    .              |   *           .
152 s515                    .              *               .
153 s515                    .              |           *   .
154 s525                    .              *|              .
```

```
155 s525                    *.              |              .
156 s525                     .      *       |              .
157 s534                     .              |       *      .
158 s534                     .              |        *     .
159 s534                     .          *   |              .
160 s545                     .             * |           .
161 s545                     .              |         *    .
162 s545                     .              | *            .
163 s554                     .              |     *        .
164 s554                     .              |           *  .
165 s554                     .              |     *        .
166 s565                     .              *              .
167 s565            *        .              |              .
168 s565                     .             * |           .
169 s574                     .              |     *        .
170 s574                     .              |             .*
171 s574                     .              |     *        .
172 s585                     .             *|              .
173 s585                     . *            |              .
================================================================================
                                                *****Output Continues****

chaffey
--------------------------------------------------------------------------------
Case Fit In input Order                                    28-Feb-** 08:20:11
all on all (N = 237 L = 34 Probability Level= .50)
--------------------------------------------------------------------------------
INFIT
 MNSQ         .63        .71        .83       1.00       1.20       1.40       1.60
-------------+---------+---------+---------+---------+---------+---------+-----
174 s585                     .            *  |              .
175 s594                     .             * |           .
176 s594                     .            *  |           .
177 s594                     .           *   |           .
178 s604                     .               |   *       .
179 s604                     .    *          |           .
180 s604                     .               |          *.
181 s615                     .               |    *      .
182 s615                     .       *       |           .
183 s615                     .          *    |           .
184 s624                     .               |       *   .
186 s624                     .               |     *     .
187 s635                     .        *      |           .
188 s635            *        .               |           .
191 s644                     .               |  *        .
192 s644                     .               | *         .
193 s655                     .              *|           .
194 s655                     .             * |           .
195 s655                     .               *           .
196 s664                    *.               |           .
197 s664                     .      *        |           .
198 s664                     .               |   *       .
199 s674                     .  *            |           .
200 s674                     .  *            |           .
201 s674                     .*              |           .
202 s685                     .              *|           .
203 s685                     .        *      |           .
204 s685                     .           *   |           .
205 s695                     .               |     *     .
206 s695                     .           *   |           .
207 s695                     .   *           |           .
208 s704                     .              *|           .
209 s704      *              .               |           .
```

```
210 s704                    .          *     |               .
211 s714                    .               *|               .
212 s714                    .                |          *    .
213 s714                    .               *|               .
214 s724                    .                |    *          .
215 s724                    .                *               .
216 s724                    .        *       |               .
217 s735                    .*               |               .
218 s735                    .          *     |               .
219 s735                    .     *          |               .
220 s744                    .                |   *           .
221 s744                    .    *           |               .
222 s744                    .         *      |               .
223 s754                    .                |         *     .
224 s754                    .      *         |               .
225 s754                    .     *          |               .
226 s765                    .               *|               .
227 s765                    .              * |               .
228 s765                    .             *  |               .
229 s774                    .          *     |               .
230 s774                    .                |*              .
231 s774                    .                |  *            .
232 s784                    .                |               .      *
================================================================================
                                                    *****Output Continues****

chaffey
--------------------------------------------------------------------------------
Case Fit In input Order                                    28-Feb-** 08:20:11
all on all (N = 237 L = 34 Probability Level= .50)
--------------------------------------------------------------------------------
INFIT
 MNSQ         .63        .71        .83       1.00       1.20       1.40       1.60
--------------+---------+---------+---------+---------+---------+---------+-----
233 s784                    .                |              *  .
235 s795                    .                |                 .            *
236 s795                    .                |          *      .
237 s795                    .                |   *             .
================================================================================
```