Production Information and Credits

This package was initiated and funded by the Australian Government Department of Education, Science and Training (DEST), and designed and produced at UNSW.

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Introduction

Welcome once again to the Advanced Training Program of the Australian Government Professional Development Package for Teachers in Gifted and Talented Education.

As with the Core and Extension Packages which you have completed earlier, we want to individualise the Program as much as possible to optimise its relevance and usefulness to you.

Initially you will select from Early Childhood, Primary or Secondary school context. For the purpose of this course we are defining early childhood as all pre-school or school years up to and including Year 2.

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While using the package, you will be able to select content that is applicable to your context.

Thank you! You're now ready to proceed.
Module 1: Understanding Giftedness

The course has examined and analysed three influential models of giftedness, Françoys Gagné's Differentiated Model of Giftedness and Talent, Joseph Renzulli's 'three-ring' model and Abraham Tannenbaum's ‘sea-star’ model. We looked at some of the ways in which gifted children and adolescents may differ from their age-peers in both their cognitive and their socio-affective development and, in particular, how intellectually/academically gifted students tend to differ in the ways they learn. In the Extension Module we revisited Betts and Neihart's six ‘profiles’ of gifted learners and discussed how different learning styles could help to explain some of the attitudes and behaviours of these students. We looked at levels of giftedness and the implications of this for program development.

Module 2: The Identification of Gifted Students

We have looked at the principles of effective identification in early childhood, in the primary school years and in adolescence. We examined the principles of reliability and validity and discussed how important these are in selecting identification tools. We discussed how using multiple criteria — a range of objective and subjective measures — rather than one test or checklist on its own, can provide a ‘safety net’ which will catch as many as possible of the gifted or talented students in your school. We have analysed the strengths and weaknesses of teacher, parent, peer and self-nomination and the use of IQ, aptitude and achievement testing and off-level testing. We have highlighted the use of dynamic testing to identify students from disadvantaged and culturally diverse populations. We analysed two different ways of synthesising the valuable data gathered from all these procedures to provide a useful identification matrix for your school.

Module 3: Social and Emotional Development of Gifted Students

This Module has highlighted ways in which intellectually or academically gifted children may differ from age-peers in their emotional maturity, their friendship conceptions, their feelings about their gifts and talents and even their hobbies and interests. We analysed possible outcomes of the ‘forced-choice dilemma’, for example ‘dumbing down’ or moderating one’s achievements for peer acceptance. We also explored the five forms of ‘over-excitability’ and noted that students who react more intensely than their classmates to intellectual, emotional or physical stimuli can sometimes be misdiagnosed as having Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD). We looked at how motivation and optimism can influence achievement and we evaluated positive and negative aspects of perfectionism. We explored some issues in parenting gifted students, such as how to encourage task-oriented rather than performance-oriented self-expectations and the importance of building facilitative home-school partnerships. We explored a range of issues in self-esteem and noted that unrealistically inflated self-esteem can be moderated by the experience of working with other students as able as oneself.

Module 4: Understanding Underachievement in Gifted Students

We explored some of the causes of underachievement among gifted students. Boredom, learning disabilities, low teacher expectations and dysfunctional perfectionism were examined. Betts and Neihart’s ‘Profiles of the gifted and talented’ were introduced as a useful framework to identify and understand underachievement. Dynamic Testing was proposed as an effective means of identifying ‘invisible underachievers’ from culturally diverse and low socio-economic groups. We noted that underachievement often arises from students’ own beliefs that they are of low ability or little value and we suggested strategies through which teachers can identify and assist those students. We discussed the links between academic self-efficacy and students'
abilities to persevere in the face of difficulties and we examined some strategies that teachers can use to enhance students’ self-efficacy through mastery experiences — including the provision of positive role models. We investigated key factors in underachievement in Australian Indigenous children such as the educational disadvantage experienced by involuntary minority status peoples, and the distrust of, and negative attitudes toward, education that can emerge from this. We affirmed the importance of allowing all underachievers to experience ‘flow’.

Module 5: Curriculum Differentiation for Gifted Students

This Module introduced some procedures which teachers can use to differentiate the level, pace and complexity of curriculum delivery for gifted learners through modifying content, process, product and learning environment. We showed how the use of pre-testing, to assess what students already know, allows us to minimise unnecessary revision by compacting the curriculum. Bloom’s Taxonomy and the Williams model of curriculum development provide useful structures through which teachers can develop an enriched and challenging curriculum for gifted students, while the Kaplan model provides an excellent scaffold for developing theme-based independent study or research projects. The Maker model provides a vehicle for developing extension activities through differentiating the content, process, product and learning environment and through providing rich tasks and ‘real world’ problem solving activities for gifted students. We examined some of the research supporting curriculum differentiation for gifted students and explored different ways in which we can evaluate the effectiveness of curriculum differentiation. We noted that different levels of giftedness require different curriculum differentiation strategies.

Module 6: Developing Programs and Provisions for Gifted Students

This Module explored some of the mythologies which have grown up around ability grouping and acceleration and introduced some of the research-based findings that support the use of these procedures for gifted and talented learners. The concept of effect size was introduced as a useful way of representing learning gains through different programs of acceleration and ability or achievement grouping. Several forms of grouping and acceleration were described and their academic outcomes reported. Practical hints were provided to maximise the effectiveness of these programs. The international guidelines on acceleration were introduced to enable teachers and parents to evaluate both a student’s readiness for acceleration and which forms of acceleration might be most suitable. We examined both the possibilities and the pitfalls of using cooperative group learning with gifted students. We explored the possibilities of online and group mentoring and its particular advantages for gifted students in rural and remote areas. We explored issues in the development and management of individual education programs which can be extremely beneficial and which are particularly necessary for students of more than moderate levels of giftedness, students who have a learning disability or physical impairment, or indeed any gifted student who is significantly underachieving or at risk of becoming a chronic underachiever.

The Specialisation Level of the Professional Development Package builds on, and expands from, the Core and Extension Packages.

We have not provided pre-tests for the Specialisation Modules as we anticipate that, having progressed this far, you are enjoying the Professional Development Package and will be eager to work through the material that follows.
Module 4

Early Childhood

Dr Graham Chaffey
Welcome to Specialisation Module 4. In this Module we will investigate a number of different aspects of underachievement:

- Coolabah Dynamic Assessment (CDA), a recent methodology that shows considerable promise in identifying gifted underachievers, especially ‘invisible’ underachievers.

- the examination of classroom and school strategies that will assist in reversing and preventing underachievement. This will include a synthesis of the factors implicated in underachievement that have been discussed in the Core and Extension levels of Module 4.

- key issues concerning catering effectively for gifted learning disabled children.

Dr Graham Chaffey
## Other Issues in Understanding Underachievement in Gifted Students

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Outcomes

At the completion of this Specialisation Module you will:

- increase your familiarity with CDA as a new way of identifying and understanding gifted ‘invisible’ underachievers.
- understand and have access to strategies that can help teachers reverse and prevent underachievement.
- realise that learning disabilities may mask the academic gifts of many children.

Understanding this will help you to deal with these students in ways that assist them to work towards their true potential.
Part 1

Coolabah Dynamic Assessment: Identifying ‘invisible’ gifted underachievers

In the Core, Extension and Specialisation levels of Module 2 we have provided a broad overview of a range of traditional methods used to identify academically gifted children. The principle of using multiple identification methods has been emphasised because not all children demonstrate their academic potential through any one method. One group discussed in Core Module 4, ‘invisible’ underachievers, have proved difficult to identify in the past as they actually perform below potential on the most regularly used methods, namely one-off IQ tests and teacher-centred subjective assessments.

However, dynamic assessment methods are showing great promise in identifying gifted ‘invisible’ underachievers, students who have remained unidentified in our schools. In Part 1 of this Specialisation Module an in-depth look at the Coolabah Dynamic Assessment (CDA) method, a product of recent Australian research, is presented.

Why is dynamic assessment desirable as an identification tool?

The underrepresentation of children from culturally diverse and low socio-economic status groups in programs for gifted students (Taylor, 1998) is an issue that needs to be addressed. The Coolabah Dynamic Assessment method shows considerable promise in identifying gifted children from these backgrounds where commonly used methods have, too often, failed.

Some gifted students who underperform in the classroom also perform below their potential in identification tasks such as IQ tests and teacher-centred methods. These students, often from culturally diverse or disadvantaged backgrounds, were discussed in Core Module 4 as gifted ‘invisible’ underachievers. They underperform due to a variety of reasons, such as a powerful forced-choice dilemma, a serious problem with academic self-belief leading to poor task engagement, or a fear of failure. These and other issues were discussed in Core Modules 3 and 4. For these children, we need to look behind the talent masks — and Coolabah Dynamic Assessment is designed to do just that.
The CDA method targets both socio-emotional and cognitive factors implicated in the underachievement of some gifted children. By nullifying these talent masks the true academic potential of gifted ‘invisible’ underachievers may be revealed. There is research evidence (Chaffey, Bailey & Vine, 2003) that CDA can succeed with ‘invisible’ underachievers where one-off traditional methods fail, as it seeks to optimise rather than just sample cognitive performance. A clearer picture of a child’s cognitive potential is thus revealed.

Consider the case of Jane.

Jane was nine years old when she was assessed using the CDA. On the pre-test she scored at the 57th percentile band. Following intervention, where she excelled, Jane attained the 96th percentile band. Interviews with Jane, her teacher and her mother revealed that it was likely that the weak pre-test score was the result of a powerful forced-choice dilemma. Jane simply did not want to stand out, in an academic sense, from her mates.

The CDA had been successful in removing this talent mask and revealing a gifted child. Jane’s teacher was delighted and not at all surprised by the outcome.

What is dynamic assessment?

Dynamic assessment is a method that assumes that some individuals can achieve much more cognitively if given the opportunity to work with a ‘significant other’ to enhance their cognitive efficiency.

Lidz (1997, p. 281) defined dynamic assessment as:

‘approaches to the development of decision-specific information that most characteristically involve interaction between the examiner and examinee, focus on learner metacognitive processes and responsiveness to intervention, and follow a pre-test-intervention-post-test administrative format.’
Generally, dynamic assessment methods follow three steps:

- A suitable pre-test is given to gain an idea of the child’s present level of cognitive functioning.
- An intervention follows where the child interacts with a trusted adult in a way designed to enhance metacognition and cognitive efficiency generally.
- Finally, a post-test (usually the same as the pre-test) is given to determine the impact of the intervention.

Those who perform to their cognitive potential at pre-test will make only small gains, if any, at post-test. However, those who substantially underperform on the pre-test have the potential to show large gains at post-test.

To illustrate this point, consider the case of Alison and Marla. Both girls were nine years old, and part of a group being assessed using the CDA.

At pre-test both girls scored at the 45th percentile band. However, following intervention a remarkable change occurred. Alison’s score rose to a level suggesting that she was capable of performing at the 92nd percentile band (i.e., in the gifted range) while Marla’s post-test score moved up only marginally.

Alison was revealed as a gifted ‘invisible’ underachiever — with much higher academic potential than her current performance indicated — while Marla was likely to be working close to her potential.
Dynamic assessment — a change in approach

Essentially, dynamic assessment seeks to optimise, rather than simply sample, cognitive functioning and it is here that a paradigm shift (a shift in the basic way we think about an issue) in intellectual assessment is apparent (Grigorenko & Sternberg, 1998, p. 77; Lidz, 1997, p. 291).

Explaining the significance of the paradigm shift, Tzuriel & Feuerstein (1992, pp. 187–188) state that:

‘The assessment of cognitive modifiability requires an investment in attacking the cognitive impairments, deficient learning habits, and motivational patterns that are responsible for the poor performance. This assessment has special significance for disadvantaged and special needs children, who are jeopardized by conventional psychometric methods.’

Students who may perform poorly initially in a dynamic assessment procedure are not labelled on that basis as this represents a starting point only in their intellectual assessment. Lidz (1997, p. 282) explains:

‘Dynamic assessment begins where traditional psychometric assessment ends. Instead of terminating the procedure with the establishment of a ceiling, the dynamic assessor views the ceiling as an area of functioning that warrants exploration.’
The Coolabah Dynamic Assessment method

The Coolabah Dynamic Assessment (CDA) method (Chaffey, 2003) has been designed as an identification tool for ‘invisible’ gifted underachievers, aged eight to eleven years. The CDA has a classic pre-test–intervention–post-test design, with an intervention that specifically targets factors implicated in the underachievement of gifted children, especially those from culturally diverse and low SES backgrounds.

The pre-test and post-test

The pre-test/post-test chosen for the CDA is Raven’s Standard Progressive Matrices (RSPM). This measure was chosen for the following reasons:

- It is considered an excellent measure of the underlying ability to learn.
- It is considered to be relatively culture fair due to the lack of specific literacy requirements and cultural icons.
- It has sound Australian norms.
- It is perceived by children more as a set of puzzles than as a test, and as fun.
- It does not have a ceiling for children in the 8–11 years age range.

The intervention

The CDA intervention focuses on both cognitive and socio-emotional factors thought to contribute to underachievement in cognitive performance.

Socio-emotional factors

Socio-emotional factors implicated in cognitive underachievement include lack of trust, fear of failure, fear of success and low academic self-efficacy. The CDA intervention has been designed with a key underlying assumption:

If distrust, fear and lack of motivation are not overcome then any attempt to engage the child in meaningful cognitive tasks will be severely compromised.

Consequently, the CDA has specific strategies designed to create a fear- and stress-free environment, that is also great fun and intrinsically motivating.
Cognitive factors

The cognitive component of the intervention comprises the development of metacognitive skills and the enhancement of emerging cognitive processes — remember ‘flow’ and Vygotsky’s Zone of Proximal Development from Extension Module 4. These are achieved by engaging the children in cognitive tasks that are carefully graded in difficulty from extremely simple to a level that challenges the brightest children of this age. Numerous strategies provide metacognitive pathways and self-efficacy enhancement as well as cognitive engagement in the ‘flow zone’.

Self-efficacy

Individuals with low academic self-efficacy will engage reluctantly (if at all) and give up very quickly — definitely not an approach that will optimise cognitive performance. Consequently, an overlaying self-efficacy enhancing intervention was developed for the CDA. The key components of these intervention strategies are:

- constant mastery of the cognitive items. This is achieved by providing the minimum level of scaffolding for every child to achieve success.
- vicarious experience developed through the high expectation and trust of the CDA provider, and the success of the whole group.

Time

The intervention takes two hours and is delivered by an accredited CDA provider. Assessments are done in groups of four, which has been found to be the optimal group size for such a process.

An appropriate cultural setting

If the group being assessed has a particular cultural background then care is taken by the CDA provider to be aware of, and address, any specific cultural issues.

The CDA — a win-win for the children

While the primary aim of using the CDA is to reveal ‘invisible’ gifted underachievers, the CDA really is a win-win for every child participating. This is so because:

- every child will develop a range of metacognitive skills.
- every child will undergo a program designed to enhance academic self-efficacy.
- and it is a lot of fun as well as intrinsically rewarding!
Greg was eight years old when he was assessed using the CDA. Greg was described by his teacher as being ‘totally disengaged’ and the CDA provider was advised not to expect too much.

During the early stages of the intervention the teacher’s prophecy, indeed, seemed to be holding true. However, midway through the intervention the self-efficacy and metacognitive strategies began to have an effect and Greg began to engage in the cognitive tasks. His rate of improvement was astounding. Also, Greg was reluctant to leave the room and asked when he could ‘come back to do some more puzzles’.

At pre-test, Greg scored at the 40th percentile band while at post-test he reached the 90th percentile band.

Greg provides a good example of a child with cognitive inefficiency due to long-term disengagement. As well, Greg really enjoyed the dynamic assessment experience.
Research outcomes using the Coolabah Dynamic Assessment method

The method
The original research that developed and validated the CDA was a PhD study completed at the University of New England (Chaffey, 2002).

The participants
The researcher used the CDA to assess 79 Aboriginal children, from Years 3, 4 and 5, from rural and regional towns in northern New South Wales. It was decided to focus on Aboriginal children because of this cultural group’s academic underachievement and under-representation in programs for the gifted.

The methodology
To ensure that the CDA outcomes were not simply practice effects, half of the Total Group were randomly placed in a Control Group. The Intervention Group received the full CDA intervention whereas the Control Group received a placebo intervention that only appeared similar in nature.

Results
Group data and discussion
The RSPM has a total of 60 questions. In order to make comparisons within the study group, and with the wider Australian population, the scores are reported here as raw scores out of 60 and as percentile bands derived from RSPM norms (see Table 1). Gain scores from pre-test to post-test are also presented, in Table 2.

Table 1: Control and Intervention Group mean raw score and mean percentile bands from pre-test to post-test

<table>
<thead>
<tr>
<th>CDA</th>
<th>Intervention Group</th>
<th>Control Group</th>
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<tbody>
<tr>
<td></td>
<td>Raw</td>
<td>Percentile band</td>
</tr>
<tr>
<td>Pre-test mean</td>
<td>27.85</td>
<td>29.9</td>
</tr>
<tr>
<td>Post-test mean</td>
<td>36.24</td>
<td>54.4</td>
</tr>
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</table>
Tables 1 and 2 report a number of interesting data:

- **The pre-test scores are very low, even though a relatively culture fair test was used.**
  
  **Implications:** This strongly suggests that the underachievement on the pre-test was not due to the nature of the test, but to factors dealt with in the intervention, that is, socio-emotional and cognitive issues. Therefore, even relatively culture-fair tests are not likely to be much better than any other assessment method in identifying giftedness in some ‘at risk’ groups, a view supported by other recent research (Lidz & Macrine, 2001; Tzuriel & Feuerstein, 1992).

- **The Control Group gain from pre-test to post-test was very small compared with that of the Intervention Group.**
  
  **Implications:** The CDA intervention was responsible for the large gains made by the Intervention Group. The small gains made by the Control Group strongly suggest that the practice effect of doing the RSPM twice is small and not significant.

- **The mean Intervention Group percentile band score at post-test (54.49) suggests that this group had performed as an average group of children.**
  
  **Implications:** The pre-test score represented a significant underachievement compared to the group’s academic potential as revealed by the CDA. Following the CDA intervention the group performed as an average group in our society.

- **The gain from pre-test to post-test for the Intervention Group is statistically significant (p<.0001).**
  
  **Implications:** The likelihood of these results occurring by chance is very low (less than 1 chance in 10,000).

- **The difference between the Control Group and Intervention Group at post-test is statistically significant (p<.0001).**
  
  **Implications:** The likelihood of these results occurring by chance is very low (less than 1 chance in 10,000).

### Table 2: Control and Intervention Groups mean raw score gain from pre-test to post-test

<table>
<thead>
<tr>
<th>CDA</th>
<th>Intervention Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean gain pre-test to post-test</td>
<td>8.39</td>
<td>2.79</td>
</tr>
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</table>

**Tables 1 and 2 report a number of interesting data:**

- **The pre-test scores are very low, even though a relatively culture fair test was used.**
  
  **Implications:** This strongly suggests that the underachievement on the pre-test was not due to the nature of the test, but to factors dealt with in the intervention, that is, socio-emotional and cognitive issues. Therefore, even relatively culture-fair tests are not likely to be much better than any other assessment method in identifying giftedness in some ‘at risk’ groups, a view supported by other recent research (Lidz & Macrine, 2001; Tzuriel & Feuerstein, 1992).

- **The Control Group gain from pre-test to post-test was very small compared with that of the Intervention Group.**
  
  **Implications:** The CDA intervention was responsible for the large gains made by the Intervention Group. The small gains made by the Control Group strongly suggest that the practice effect of doing the RSPM twice is small and not significant.

- **The mean Intervention Group percentile band score at post-test (54.49) suggests that this group had performed as an average group of children.**
  
  **Implications:** The pre-test score represented a significant underachievement compared to the group’s academic potential as revealed by the CDA. Following the CDA intervention the group performed as an average group in our society.

- **The gain from pre-test to post-test for the Intervention Group is statistically significant (p<.0001).**
  
  **Implications:** The likelihood of these results occurring by chance is very low (less than 1 chance in 10,000).

- **The difference between the Control Group and Intervention Group at post-test is statistically significant (p<.0001).**
  
  **Implications:** The likelihood of these results occurring by chance is very low (less than 1 chance in 10,000).
Individual data and discussion

Assessment for identification purposes is necessarily an individual process. Therefore it is useful to examine individual scores in this study. The pre-test and post-test raw scores and percentile bands for gifted children in the Intervention Group are presented below in Table 3. The 90th percentile band, as recommended by Gagné (1995), was used to define the ‘Gifted’ Group.

Table 3: Raw scores and percentile bands of the ‘Gifted’ Group at pre-test and post-test

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>Post-test</th>
<th></th>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Raw score</td>
<td>Percentile band</td>
<td>Raw score</td>
<td>Percentile band</td>
<td>Gain</td>
<td></td>
</tr>
<tr>
<td>Terry</td>
<td>23</td>
<td>26%</td>
<td>45</td>
<td>96%</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Adam</td>
<td>21</td>
<td>18%</td>
<td>44</td>
<td>91%</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Kate</td>
<td>35</td>
<td>58%</td>
<td>43</td>
<td>91%</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Ian</td>
<td>45</td>
<td>86%</td>
<td>50</td>
<td>97%</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Leisha</td>
<td>41</td>
<td>81%</td>
<td>45</td>
<td>93%</td>
<td>4</td>
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Table 3 provides a number of interesting data.

- **At pre-test none of the Intervention Group, nor of the Control Group, reached the 90% ‘gifted’ benchmark.**

  **Implications:** Even using a widely recommended, relatively culture fair test none of these children would have been identified as gifted without the CDA intervention.

- **Following the CDA intervention five of the Intervention Group members reached the ‘gifted’ benchmark.**

  **Implications:** The CDA was successful in identifying previously unidentified ‘invisible’ gifted underachievers. If a one-off application of the RSPM (the pre-test) were used as an identification tool none of the 79 children in the study would have been identified as gifted using the 90% benchmark.
• The pre-test scores of Terry and Adam were very low.

**Implications:** If these scores were taken as a one-off measure, as is often done, these boys could easily have been labelled as having low learning potential. The CDA demonstrated that the pre-test results were an enormous underachievement.

**In summary**

The CDA was successful in identifying gifted students from a group who have both underachieved academically in school and participated little in gifted education programs. Further, gifted children have been revealed in this sample in approximately the same proportions as in the general population.

**General individual data**

Although the CDA is designed to provide a better way of identifying gifted underachievers, another very useful outcome occurred in this study. Substantial numbers of children who did not achieve the gifted benchmark, or achieved at low levels at pre-test, made large gains at post-test, demonstrating much higher learning potential than expected. This knowledge, in the general school setting, has great potential to help both the student and the teacher. We will illustrate this point with the case of Erin.

---

**Erin**

Erin was nine years old at the time she was assessed with the CDA. Erin had pre-tested at the 37th percentile band, a score that fitted with her classroom teacher's estimate of performance and potential.

However, at post-test Erin progressed strongly to the 78th percentile band. While not moving her into a gifted band, this outcome triggered inquiries by her parents which ended with her paediatrician suggesting that premature birth is sometimes accompanied by cognitive delay — for Erin had experienced a very premature birth.

Over the last two years (since her assessment) Erin has progressed steadily and is now achieving in class much closer to her cognitive potential as revealed by the CDA.
Further research using the CDA

Further research using the CDA has revealed similar findings in a number of different groups, in both Australia and Canada.

- A pilot assessment of mainstream Year 3 students in Australia has revealed a surprisingly high proportion of ‘invisible’ underachievers.
- A pilot program to assess Canadian Indigenous children has revealed a substantial number of ‘invisible’ underachievers (Chaffey, McCluskey & Halliwell, Under review).

Three major identification projects using the CDA as the central tool are planned for English as a Second Language (ESL), Australian Aboriginal and mainstream children. Details of the findings from these will be published as they become available.
Reflective/Practical Component

1. List the benefits that may result from identifying any ‘invisible’ gifted underachievers in your class.

2. List the difficulties that may result from identifying any ‘invisible’ gifted underachievers in your class.

3. Consider what strategies you might employ to address the needs of any ‘invisible’ gifted underachievers in your class.

In groups of three or four:

1. List and discuss the benefits that may result from identifying any ‘invisible’ gifted underachievers in your class.

2. List and discuss the difficulties that may result from identifying any ‘invisible’ gifted underachievers in your class.

3. Consider and discuss what strategies you might employ to cater for any ‘invisible’ gifted underachievers in your class.

1. List the benefits that may result from identifying any ‘invisible’ gifted underachievers in your school.

2. List the difficulties that may result from identifying any ‘invisible’ gifted underachievers in your school.

3. Consider what strategies you might employ to cater for any ‘invisible’ gifted underachievers in your school.
Catering for the gifted underachiever

In the Core and Extension levels of Module 4 information has been provided that is designed to assist the classroom teacher to cater better for the gifted underachievers — both visible and invisible — in the classroom. In Part 2 of the Extension Level of Module 4 the issue of gifted children with learning disabilities is discussed along with more depth and actual classroom strategies for helping gifted children with low academic self-efficacy. Section 2 is finalised with suggested pathways for assisting gifted Indigenous students reach their academic potential.

Unfortunately, there are no ‘magic bullets’ that will suddenly reverse underachievement. However, understanding the issues that contribute to underachievement is a necessary starting point and will allow you to make meaningful, positive steps. Perseverence and patience are then needed.

Working with gifted students with learning disabilities

Gifted children with learning disabilities have been described as twice-exceptional as they are different from the norm in two ways (Moon & Reis, 2004). The incidence of learning disabilities in the gifted population is at least as high (10-15%) as in the rest of the population (Silverman, 2003). However, ‘recognition of this group has been hindered by the common perception that giftedness equates with academic achievement’ (Silverman, 2003, p. 533). This issue is complicated by the fact that gifted learning disabled (GLD) children often cope in schools, as their high intellectual ability allows them to partially compensate for their disability. However, these children rarely achieve to their potential.

Silverman (2003) notes, with concern, that GLD children are too often unrecognised as such and poor or different behaviours are related to a ‘lazy’ or unmotivated child. It is useful at this point to make the link with low academic self-efficacy and GLD children. In the Core and Extension levels of Module 4 it was noted that key symptoms of low academic self-efficacy were low motivation, tentative or non-engagement and poor persistence. Is this Silverman’s ‘lazy and unmotivated child’?
GLD children are also disadvantaged with respect to provision for gifted students. IQ test scores for GLD children are usually depressed due to problems associated with their learning disability, preventing them from qualifying for programs for the gifted. Further, teacher-centred identification methods (for more details on identification practices refer to Module 2) are highly unlikely to result in the nomination of a child who has major problems in classroom basics, or who seems uninterested and unmotivated.

To help you to recognise and understand GLD children, key aspects of the most prevalent types of learning disabilities are presented.
Common learning disabilities in gifted students

Silverman (2003) has identified six major learning disabilities that are common in gifted children. These are presented, along with definitions and symptoms in Table 4, below.

<table>
<thead>
<tr>
<th>Learning Disability</th>
<th>What is it?</th>
<th>Symptoms</th>
</tr>
</thead>
</table>
| Sensory integration dysfunction            | This involves a dysfunction in the organisation of sensations that enable the brain to make sense of the environment. | • Fine motor difficulties such as writing or drawing.  
• Gross motor difficulties such as throwing and catching.  
• Intense reactions to sensory stimuli such as sound, light, touch, smell and taste. |
| Auditory processing disorder              | The inability to hear effectively or process sounds.                      | • Often due to chronic ear infections (otitis media). This makes gifted Indigenous children particularly prone to this problem due to the extraordinarily high prevalence of otitis media in Aboriginal children. Indigenous children in Canada and the USA experience similar problems.  
• Gifted children may mask their hearing loss with compensating strategies.  
• They are often inattentive, don’t follow instructions and copy others to find out what to do.  
• Loud noise will cause pain so they are uncomfortable in noisy settings.  
• Poor development in motor sequencing skill associated with reading and writing.  
• Poor motor skill development often linked.  
• Highly developed oral skill and visual-spatial ability. |
### Visual processing disorder

The inability to see well.

- Gifted children may escape early detection due to their ability to compensate.
- Specific symptoms include double vision, blurred vision, closing one eye, being very close to watch or read, and difficulty in writing or spelling.
- An early reader suddenly stops reading when the print in “bigger kids” books becomes smaller.

### Attention Deficit Hyperactivity Disorder (ADHD)

**Silvermann (2003) identifies two types.**

**Type 1: Hyperactive and impulsive**

- Hyperactive with poor attention. Diagnosis is often controversial due to the large number of children placed on medication.
- Is usually obvious from an early age (before seven).
- Have difficulty making friends as they find it difficult to understand social cues.
- Usually socially and emotionally immature, with poor self-regulation.

**Type 2: Inattentive**

- As this type of behaviour is less obvious it may not become evident until early high school.
- Very difficult to diagnose, especially in girls.
- They have problems organising themselves. Schoolwork is often not completed.
- Have difficulty making friends as they find it difficult to understand social cues.
<table>
<thead>
<tr>
<th><strong>Dyslexia</strong></th>
<th>Is the result of a variety of processing problems that inhibit the development of reading skills.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Is associated with phonological impairments.</td>
</tr>
<tr>
<td></td>
<td>• The child is often a strong visual-spatial learner.</td>
</tr>
<tr>
<td></td>
<td>• Will have major reading problems.</td>
</tr>
<tr>
<td></td>
<td>• Letters are confused and often mixed up.</td>
</tr>
<tr>
<td></td>
<td>• They often think in pictures so frequently can’t show how they achieved an answer.</td>
</tr>
<tr>
<td></td>
<td>• If given support dyslexic children may demonstrate high ability in creative tasks associated with their visual capacity. After all, Albert Einstein and Leonardo da Vinci were dyslexic!</td>
</tr>
<tr>
<td></td>
<td>• Is often associated with writing disability (dysgraphia), poor rote memory, poor spelling and language mechanics.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Nonverbal learning disorder (Spatial disorientation)</strong></th>
<th>Experience a serious problem in negotiating space. In many ways this problem is the mirror image of dyslexia.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Experience serious problems with visual-spatial organisation, nonverbal problem solving and psychomotor efficiency.</td>
</tr>
<tr>
<td></td>
<td>• Problems they may experience include getting lost easily, missing social cues, tending to be clumsy, being unable to visualise and having difficulty adapting to new situations.</td>
</tr>
<tr>
<td></td>
<td>• Are often strong in verbal-sequential tasks such as written tasks and spelling.</td>
</tr>
</tbody>
</table>

Silverman (2003, pp. 534-538)
An additional note on ADHD

- Ken and Andrea McCluskey, at the University of Winnipeg, Canada, have produced an outstanding text on this subject (McCluskey & McCluskey, 2001). It is designed for teachers and links personal experience with scholarly research evidence, providing practical insights that can only emerge from family experience that has seen the McCluskeys’ ADHD daughter, Amber, emerge as an achieving gifted adult and mother.

Diagnosing writing disabilities

A very bright child who hates to write is a common expression of a learning disability (Silverman, 2003). Consequently a diagnostic checklist, developed by Silverman (2003), to help recognise a writing disability is presented below.

Diagnostic checklist of writing disability

If you can answer ‘yes’ to 10 or 11 of these questions the children should be assessed for a writing disability (Silverman, 2003, pp. 540-541).

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is their writing posture awkward?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. Do they hold their pencil strangely?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3. Can you see the tension run through their hand, arm or furrowed brow?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. Does it take them much longer to write than anyone else their age?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. Do they fatigue easily and want to quit?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6. Do they space their letters on the paper in an unusual way</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>(too close, too far apart, no spaces between words)?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. Do they form their letters oddly (e.g., starting letters at the top</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>where others would start at the bottom)?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8. Do they mix upper- and lower-case letters?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9. Do they mix cursive and manuscript letters?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>10. Are their cursive letters disconnected?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>11. Do they prefer manuscript to cursive?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>12. Does their lettering lack fluidity?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>13. Do they still reverse letters after age seven?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>14. Is their handwriting illegible?</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
15. Are they very poor spellers?  
16. Do they avoid writing words they can’t spell?  
17. Do they leave off the endings of words?  
18. Do they confuse singular and plural?  
19. Do they mix up small words, like ‘the’ and ‘they’?  
20. Do they leave out soft sounds, like the ‘d’ in gardener?  
21. Is their grasp of phonics weak?  

(Silverman, 2003, pp. 540-541).

**Strategies for helping the GLD student**

Silverman (2003, pp. 541-542) has recommended a number of strategies for assisting the GLD child. Three general principles underpin the suggested strategies.

- The first, and most important principle, is to identify the learning disability as soon as possible. This should be done before the age of nine if remediation strategies are to achieve maximum success.
- The second principle is that you should always teach to the child’s strengths.
- The third principle is that compensation strategies should be actively sought, whatever the disability.

**Strategies include:**

- Individual education programs (IEPs) need to be developed (see Extension Module 6 for details of this process). The programs should enhance the student’s strengths as well as make adaptations for his or her weaknesses.
- Timed tests or tasks should be avoided where possible, as GLD children usually have compromised processing speeds.
- Allowing students with writing disabilities to use a computer for written tasks will be a great help. In severe cases a voice-activated computer may be necessary. Generally, technological aids should be used wherever possible.
- Many GLD children think in pictures. Hands-on learning and visual presentations are vital to their learning.
Part of being a visual learner is that they are whole-part learners rather than sequential learners. Therefore, it is important that correct answers be accepted even if the steps cannot be demonstrated.

Help the student learn visualisation skills.

Written assignments should be minimised. Oral exams and reporting are useful substitutes.

Don’t lower marks due to mechanical problems such as spelling or sentence structure.

Acceleration may be a useful option for GLD children if they handle complex tasks easily. The ‘simple’ tasks may defeat them but they may thrive on the more complex learning that acceleration can provide.

(If considering the acceleration option reread thoroughly the recommended guidelines and practices for acceleration in Core and Extension Modules 6.)

Underachievement and low academic self-efficacy

The chicken or the egg?

Low academic self-efficacy can act as either a primary or a secondary source of underachievement. That is, low academic self-efficacy can lead directly to academic underachievement (act as a primary source) or it may develop as the result of specific experiences or conditions (act as a secondary source).

This point is illustrated by the following case studies, of Liam and Kate.

Liam

Liam is a gifted learning disabled child. He comes from a background where books abound and education is valued. His mother and father are both teachers. Liam experienced extreme difficulties developing his literacy skills and rapidly fell behind at school. He experienced little success despite his best efforts and now exhibits signs of low academic self-efficacy, almost certainly triggered by a lack of mastery experiences, due to his learning disability. In Liam’s case, low academic self-efficacy is a secondary source of underachievement as it developed as a result of poor mastery from another source. However, the low academic self-efficacy has now become a specific source of underachievement as well.

Kate

Kate comes from a home where books are rare and education is little valued. She rarely encounters positive academic role models in her daily life. Kate began her schooling eagerly but quickly realised that she did not know as much as the others. Disengagement began before the end of Kindergarten/Reception. Kate actually began her school life with low academic self-efficacy due to a lack of pre-school mastery experiences and positive academic vicarious experiences. However, Kate was identified as an academically gifted child when eight years old. In Kate’s case, low academic self-efficacy was a primary source of underachievement.
An important point to note here is that children from all backgrounds can develop low academic self-efficacy. Once established, low academic self-efficacy will result in poor task engagement, lessened persistence and low resilience with respect to academic tasks. Low academic self-efficacy can be a powerful, self-reinforcing talent mask that will inhibit academic achievement.

Whenever children are the subject of influences that lead to academic underachievement, one of the likely casualties is their self-belief (self-efficacy) that they can achieve academically (as we discussed in Core and Extension Modules 4). Consequently, a very good starting point in attempts to reverse underachievement is often the adoption of strategies that target self-efficacy enhancement. The specific causes of underachievement will need to be specifically dealt with as well, but self-efficacy is a fine starting point. The three major contributors to self-efficacy — that is, mastery experiences, vicarious experience and verbal persuasion (Bandura, 2003) — should be the target.
Strategies for enhancing academic self-efficacy in underachievers

Enhancing academic self-efficacy through mastery experiences

A cognitively engaged gifted child is on the way to reaching his or her academic potential. The hoped for outcomes in enhancing low academic self-efficacy are the development of engagement, persistence, resilience and the intrinsic motivation that accompanies self-belief.

A student who won’t engage in an academic task, or who engages reluctantly and with little persistence, is doing so for a reason.

Consequently, a concerted effort by the teacher to reverse the situation will be necessary. You will have to be patient, persistent and not give up. That is, your self-efficacy as a teacher will be tested!

The tasks

Selecting suitable tasks that are designed to provide constant success is essential. These tasks should:

- begin at a difficulty level considerably below the expected performance level of the child.
- be graded so that the degree of difficulty increases slowly.
- ensure that the child achieves success at every task.
- be visual for those who are strong visual-spatial learners.
- if possible, be perceived as ‘fun’ by the child. (Chaffey, 2002)

Ensuring mastery

To ensure that the child is successful with the mastery tasks a number of strategies are required:

- Carefully explain what is required in the task so that the child does not see ‘demons’ that don’t exist.
- If the child needs support to reach a solution provide just enough scaffolding to ensure success.

Avoid directly giving solutions — the child needs to provide the cognition. Scaffolding requires the teacher to provide direction and links, to allow the child to move from what she knows to new understandings.
• **Slow the child down.** A child rushing to finish (acting impulsively) is highly unlikely to engage effectively in the cognitive process.

• Provide **performance and attributional feedback, a major source of verbal persuasion**, following successful mastery experiences (Bandura, 2003).

  **Performance feedback** involves explaining to the students that their success was due to the process followed. This type of feedback should contain a careful reiteration of the steps that led to the success.

  **Attributional feedback** is designed to ensure that the students understand that their achievements were the result of their effort and ability.

• Closely linked to feedback is the provision of **appropriate praise.** Brophy (1981) suggests a number of strategies for enhancing praise, eg:
  
  — The accomplishment is specifically identified.
  
  — Information is conveyed to the student regarding the particular student competence that led to success.
  
  — Praise is delivered only when it is deserved and has a clear focus.

  Unearned praise is quickly recognised by the gifted child and may result in a negative effect on his engagement due to loss of trust.

• Following a successful mastery experience allow the child to explain to you (verbalise) how she reached the solution. This approach also supports the development of self-efficacy through the self-confirmation that the student really understood the process (Carlson & Wiedl, 1979). Teacher confirmation should follow the child’s verbalisation.

  As Piaget (Source unknown) noted ‘Children will only verbalise what they can deal with conceptually.’

**The learning environment**

It is essential to **keep the whole process as stress free as possible.** This may mean establishing or deepening trust, removing the fear of failure and the fear of doing too well (recall from Core Module 4 and Core Module 1 the forced-choice dilemma and the effect of stress generally). These socio-emotional issues may act as barriers to the mastery process.
Enhancing academic self-efficacy through vicarious experiences

‘Efficacy appraisals are partly influenced by vicarious experiences mediated by modelled attainments. So modelling serves as another effective tool for promoting a sense of personal [self] efficacy’ (Bandura, 2003, p. 86)

The effect of modelled experience on self-efficacy is well documented. By observing other people succeed, individuals may feel success is more possible for them and increases in efficacy expectation may result. Bandura (2003) found that while vicarious experience is an important source of self-efficacy it is not as powerful as mastery.

Strategies for facilitating vicarious experiences

Providing the student with appropriate adult and peer role models is your goal. If you wish to influence the student’s academic self-efficacy then the role model must be successful in the academic domain. However, there is a need to provide a broad match between the role model and the child. For example:

Lawrence, aged 11 and of middle eastern origin, is an exceptional soccer player and is academically gifted. However, he also displays signs of very low academic self-efficacy.

Lawrence’s teacher has decided to link him to a role model in the hope that the vicarious experience will enhance his academic self-efficacy. Lawrence’s teacher has chosen as role model a male of the same cultural background, academically successful and an architect by profession. This man also plays first division soccer.

Lawrence’s teacher felt that the vicarious experience may be far more successful on the academic level if Lawrence can first relate to the role model culturally and in the sporting domain.
The teacher as a source of vicarious experience

Teachers are a potentially powerful source of vicarious experience for students. They are natural role models for their class members and when students perceive that the teacher values and respects them, in the academic sense, academic self-efficacy growth is likely. However, the teachers’ power as a source of vicarious experience very much depends on how each individual student relates to the them. Bandura (2003, p. 87) comments:

‘The greater the assumed similarity, the more persuasive are the model's successes and failures. If people see the models as very different from themselves, their beliefs of personal efficacy [self-efficacy] are not much influenced by the model's behaviour and the results it produces.’

Teachers’ ability to influence the academic self-belief of their students is further highlighted by the effect of appropriate feedback. Bandura (2003, p. 101) notes:

‘It is easier to sustain a sense of efficacy [self-belief], especially when struggling with difficulties, if significant others express faith in one’s capabilities than if they convey doubts.’

The message is clear. Teachers must become trusted, accepted ‘significant others’ if they are to be successful vicarious experience sources for students. This is especially so for children from culturally diverse and/or low SES backgrounds.

Peer role models

Providing links with academically successful peers with whom the child can relate is another useful strategy. This form of vicarious experience has great potential, as peer pressure, in a negative sense, is often a major problem for the gifted child. This may be particularly strong for children from backgrounds where education is not highly valued or educational experiences have historically been largely negative.
Assisting Aboriginal children to overcome involuntary minority status issues

Indigenous Australian children experience greater levels of academic underachievement than their mainstream peers. It is reasonable to assume that this is the result of the lingering effect of long-term educational disadvantage, as revealed in Extension Module 4 where involuntary minority status issues were discussed. To overcome this uniquely Aboriginal issue, strategies are needed that focus on problems related to involuntary minority status (Ogbu, 1994).

Strategies for enhancing inclusion of the Indigenous community in the school

The source of the oppositional attitudes and mistrust of education that exists in many Indigenous communities is the long-term educational disadvantage experienced by members of these communities. In theory, these barriers have been lowered. However, the impact of long-term disadvantage is still carried in the form of secondary cultural traits that continue to propagate a mistrust in, and general oppositional attitude towards, education. These barriers are not easily shifted.

The answer lies in providing a school environment that is genuinely inclusive of the Aboriginal community.

The inclusion needs to be deep and genuine or the result may well be a deepening of mistrust by the Indigenous community.

Key strategies to enhance inclusion and trust in the school system

- The necessary first step is to contact the local Indigenous community and invite the elders and other senior community members to discuss your intentions and to create a joint plan.

- It is important for teachers to understand Indigenous issues, including the history of involuntary minority status and its effect on educational outcomes. Teachers need to hold expectations that, with the right guidance and opportunities, Indigenous students will achieve academically at similar levels to those of the wider community. A strong understanding of, and partnership with, the Indigenous community will make this much more likely.

As reported in Part 1, research using Coolabah Dynamic Assessment (Chaffey, 2002) has demonstrated the extent to which Indigenous children are underachieving academically. Further, this research identified gifted Indigenous children in the same proportion as in the wider community.
Strategies for defusing the forced-choice dilemma

The oppositional attitudes toward education generated by long-term educational disadvantage have meant that gifted Indigenous children are often in the grip of a powerful forced-choice dilemma. Doing well academically may mean losing favour in their community, especially among their age peers, an outcome that few Indigenous children would choose (Sharon Cooke, Personal communication, 2004). Strategies for weakening the forced-choice dilemma which gifted Indigenous children too often experience, must come from attacking the source.

- **What you must not do** is to try to remove or alienate the students from their community or peers. The likely outcome would be a worsening of the situation.

- **The long-term answer** is to work on community trust and real inclusion in the educational process (as discussed above). This will gradually increase the Indigenous community's acceptance of your school and decrease oppositional attitudes. The forced-choice dilemma will equivalently weaken.

- If a powerful forced-choice dilemma exists, **short-term answers** are necessary so that gifted students can meaningfully participate, despite pressures not to stand out academically. Solving this problem is not simple, as it is deeply ingrained. Some positive strategies are:

  - Do not make the child stand out if he does well academically. Keep praise and recognition on a more personal level.
  - Work hard to establish trust.
  - Let the child know that you believe she has lots of ability and that you are prepared to help her.
  - Be patient. Little will be gained until trust is established.

---

**Case Study**

Billy, a 10-year-old Aboriginal boy, was described by his Principal, Mr Long, as the ‘academically brightest child’ he had ever taught. With the best intentions, Mr Long actively began to praise Billy publicly for his academic abilities and to ensure that every outstanding piece of work was recognised with awards at assembly. Mr Long noticed that soon after receiving these rewards, Billy was in trouble or absent from school.

**What was happening?**

Billy was the victim of a powerful forced-choice dilemma. Every academic award was followed by teasing and bullying by his peers. Mr Long believes Billy regained favour with his mates by displaying oppositional behaviours towards school.
Developing academic self-efficacy

For many gifted Indigenous students low academic self-efficacy is a major talent mask and inhibits academic development (Chaffey, 2002, 2004; Lovaglia, Lucas, Houser, Thye, & Markovsky, 1998).

Consequently, employing strategies to enhance academic self-efficacy is a necessary step to enable many Indigenous children to reach their academic potential.

In Core and Extension Modules 4, and earlier in this Specialisation Module, the issue of academic self-efficacy was discussed, do's and don’ts reviewed and strategies presented. The appropriate sections of the above Modules should now be reviewed in order to develop a pathway to enhance the academic self-efficacy of your Indigenous children. You will be delighted and, at times, surprised by the outcomes.
1. Coolabah Dynamic Assessment
   • Briefly outline the key components of the Coolabah Dynamic Assessment method.
   • What are the advantages of the CDA over other identification methods for gifted ‘invisible’ underachievers?

2. Action plan for working with GLD students
Since 10-15% of gifted students may have some sort of learning disability a plan to cater for these students in your class is desirable. Outline a classroom plan to help acknowledge, and address the needs of, GLD students.

3. Action plan for enhancing academic self-efficacy
Outline a plan to address low academic self-efficacy in your classroom.

1. Coolabah Dynamic Assessment
   • Briefly outline the key components of the Coolabah Dynamic Assessment method.
   • What are the advantages of the CDA over other identification methods for gifted ‘invisible’ underachievers?

2. Action plan for working with GLD students
Since 10-15% of gifted students may have some sort of learning disability a plan to cater for these students in your school is desirable. Outline a whole-school plan to help acknowledge, and address the needs of, GLD students.

3. Action plan for enhancing academic self-efficacy across the school
Outline a whole-school plan to ensure that low academic self-efficacy is not a problem in your school.
References and Further Reading


Websites

Gifted Learning Disabled Children and acceleration at: http://www.nationdeceived.org/

Bandura and self-efficacy at: http://www.emory.edu/EDUCATION/mfp/self-efficacy.html

Welcome to Specialisation Module 4. In this Module we will investigate a number of different aspects of underachievement:

- Coolabah Dynamic Assessment (CDA), a recent methodology that shows considerable promise in identifying gifted underachievers, especially ‘invisible’ underachievers.
- the examination of classroom and school strategies that will assist in reversing and preventing underachievement. This will include a synthesis of the factors implicated in underachievement that have been discussed in the Core and Extension levels of Module 4.
- key issues concerning catering effectively for gifted learning disabled children.

Dr Graham Chaffey
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<td></td>
<td>39</td>
</tr>
</tbody>
</table>
Outcomes

At the completion of this Specialisation Module you will:

• increase your familiarity with CDA as a new way of identifying and understanding gifted ‘invisible’ underachievers.

• understand and have access to strategies that can help teachers reverse and prevent underachievement.

• realise that learning disabilities may mask the academic gifts of many children.

Understanding this will help you to deal with these students in ways that assist them to work towards their true potential.
Part 1

Coolabah Dynamic Assessment: Identifying ‘invisible’ gifted underachievers

In the Core, Extension and Specialisation levels of Module 2 we have provided a broad overview of a range of traditional methods used to identify academically gifted children. The principle of using multiple identification methods has been emphasised because not all children demonstrate their academic potential through any one method. One group discussed in Core Module 4, ‘invisible’ underachievers, have proved difficult to identify in the past as they actually perform below potential on the most regularly used methods, namely one-off IQ tests and teacher-centred subjective assessments.

However, dynamic assessment methods are showing great promise in identifying gifted ‘invisible’ underachievers, students who have remained unidentified in our schools. In Part 1 of this Specialisation Module an in-depth look at the Coolabah Dynamic Assessment (CDA) method, a product of recent Australian research, is presented.

Why is dynamic assessment desirable as an identification tool?

The underrepresentation of children from culturally diverse and low socio-economic status groups in programs for gifted students (Taylor, 1998) is an issue that needs to be addressed. The Coolabah Dynamic Assessment method shows considerable promise in identifying gifted children from these backgrounds where commonly used methods have, too often, failed.

Some gifted students who underperform in the classroom also perform below their potential in identification tasks such as IQ tests and teacher-centred methods. These students, often from culturally diverse or disadvantaged backgrounds, were discussed in Core Module 4 as gifted ‘invisible’ underachievers. They underperform due to a variety of reasons, such as a powerful forced-choice dilemma, a serious problem with academic self-belief leading to poor task engagement, or a fear of failure. These and other issues were discussed in Core Modules 3 and 4. For these children, we need to look behind the talent masks — and Coolabah Dynamic Assessment is designed to do just that.
The CDA method targets both socio-emotional and cognitive factors implicated in the underachievement of some gifted children. By nullifying these talent masks the true academic potential of gifted ‘invisible’ underachievers may be revealed. There is research evidence (Chaffey, Bailey & Vine, 2003) that CDA can succeed with ‘invisible’ underachievers where one-off traditional methods fail, as it seeks to optimise rather than just sample cognitive performance. A clearer picture of a child’s cognitive potential is thus revealed.

Consider the case of Jane.

Jane was nine years old when she was assessed using the CDA. On the pre-test she scored at the 57th percentile band. Following intervention, where she excelled, Jane attained the 96th percentile band. Interviews with Jane, her teacher and her mother revealed that it was likely that the weak pre-test score was the result of a powerful forced-choice dilemma. Jane simply did not want to stand out, in an academic sense, from her mates.

The CDA had been successful in removing this talent mask and revealing a gifted child. Jane’s teacher was delighted and not at all surprised by the outcome.

What is dynamic assessment?

Dynamic assessment is a method that assumes that some individuals can achieve much more cognitively if given the opportunity to work with a ‘significant other’ to enhance their cognitive efficiency.

Lidz (1997, p. 281) defined dynamic assessment as:

‘approaches to the development of decision-specific information that most characteristically involve interaction between the examiner and examinee, focus on learner metacognitive processes and responsiveness to intervention, and follow a pre-test-intervention-post-test administrative format.’
Generally, dynamic assessment methods follow three steps:

- A **suitable pre-test** is given to gain an idea of the child’s present level of cognitive functioning.
- An **intervention** follows where the child interacts with a trusted adult in a way designed to enhance metacognition and cognitive efficiency generally.
- Finally, a **post-test** (usually the same as the pre-test) is given to determine the impact of the intervention.

| Those who perform to their cognitive potential at pre-test will make only small gains, if any, at post-test. However, those who substantially underperform on the pre-test have the potential to show large gains at post-test. |

To illustrate this point, consider the case of Alison and Marla. Both girls were nine years old, and part of a group being assessed using the CDA.

At pre-test both girls scored at the 45th percentile band. However, following intervention a remarkable change occurred. Alison’s score rose to a level suggesting that she was capable of performing at the 92nd percentile band (ie in the gifted range) while Marla’s post-test score moved up only marginally.

Alison was revealed as a gifted ‘invisible’ underachiever — with much higher academic potential than her current performance indicated — while Marla was likely to be working close to her potential.
Dynamic assessment — a change in approach

Essentially, dynamic assessment seeks to optimise, rather than simply sample, cognitive functioning and it is here that a paradigm shift (a shift in the basic way we think about an issue) in intellectual assessment is apparent (Grigorenko & Sternberg, 1998, p. 77; Lidz, 1997, p. 291).

Explaining the significance of the paradigm shift, Tzuriel & Feuerstein (1992, pp. 187–188) state that:

‘The assessment of cognitive modifiability requires an investment in attacking the cognitive impairments, deficient learning habits, and motivational patterns that are responsible for the poor performance. This assessment has special significance for disadvantaged and special needs children, who are jeopardized by conventional psychometric methods.’

Students who may perform poorly initially in a dynamic assessment procedure are not labelled on that basis as this represents a starting point only in their intellectual assessment. Lidz (1997, p. 282) explains:

‘Dynamic assessment begins where traditional psychometric assessment ends. Instead of terminating the procedure with the establishment of a ceiling, the dynamic assessor views the ceiling as an area of functioning that warrants exploration.’
The Coolabah Dynamic Assessment method

The Coolabah Dynamic Assessment (CDA) method (Chaffey, 2003) has been designed as an identification tool for ‘invisible’ gifted underachievers, aged eight to eleven years. The CDA has a classic pre-test–intervention–post-test design, with an intervention that specifically targets factors implicated in the underachievement of gifted children, especially those from culturally diverse and low SES backgrounds.

The pre-test and post-test
The pre-test/post-test chosen for the CDA is Raven’s Standard Progressive Matrices (RSPM). This measure was chosen for the following reasons:

- It is considered an excellent measure of the underlying ability to learn.
- It is considered to be relatively culture fair due to the lack of specific literacy requirements and cultural icons.
- It has sound Australian norms.
- It is perceived by children more as a set of puzzles than as a test, and as fun.
- It does not have a ceiling for children in the 8–11 years age range.

The intervention
The CDA intervention focuses on both cognitive and socio-emotional factors thought to contribute to underachievement in cognitive performance.

Socio-emotional factors
Socio-emotional factors implicated in cognitive underachievement include lack of trust, fear of failure, fear of success and low academic self-efficacy. The CDA intervention has been designed with a key underlying assumption:

If distrust, fear and lack of motivation are not overcome then any attempt to engage the child in meaningful cognitive tasks will be severely compromised.

Consequently, the CDA has specific strategies designed to create a fear- and stress-free environment, that is also great fun and intrinsically motivating.
Cognitive factors
The cognitive component of the intervention comprises the development of metacognitive skills and the enhancement of emerging cognitive processes — remember ‘flow’ and Vygotsky’s Zone of Proximal Development from Extension Module 4. These are achieved by engaging the children in cognitive tasks that are carefully graded in difficulty from extremely simple to a level that challenges the brightest children of this age. Numerous strategies provide metacognitive pathways and self-efficacy enhancement as well as cognitive engagement in the ‘flow zone’.

Self-efficacy
Individuals with low academic self-efficacy will engage reluctantly (if at all) and give up very quickly — **definitely not an approach that will optimise cognitive performance.** Consequently, an overlaying self-efficacy enhancing intervention was developed for the CDA. The key components of these intervention strategies are:

- constant mastery of the cognitive items. This is achieved by providing the minimum level of scaffolding for every child to achieve success.
- vicarious experience developed through the high expectation and trust of the CDA provider, and the success of the whole group.

Time
The intervention takes two hours and is delivered by an accredited CDA provider. Assessments are done in groups of four, which has been found to be the optimal group size for such a process.

An appropriate cultural setting
If the group being assessed has a particular cultural background then care is taken by the CDA provider to be aware of, and address, any specific cultural issues.

The CDA — a win-win for the children
While the primary aim of using the CDA is to reveal ‘invisible’ gifted underachievers, the CDA really is a win-win for every child participating. This is so because:

- every child will develop a range of metacognitive skills.
- every child will undergo a program designed to enhance academic self-efficacy.
- and it is a lot of fun as well as intrinsically rewarding!
Greg was eight years old when he was assessed using the CDA. Greg was described by his teacher as being ‘totally disengaged’ and the CDA provider was advised not to expect too much.

During the early stages of the intervention the teacher’s prophecy, indeed, seemed to be holding true. However, midway through the intervention the self-efficacy and metacognitive strategies began to have an effect and Greg began to engage in the cognitive tasks. His rate of improvement was astounding. Also, Greg was reluctant to leave the room and asked when he could ‘come back to do some more puzzles’.

At pre-test, Greg scored at the 40th percentile band while at post-test he reached the 90th percentile band.

Greg provides a good example of a child with cognitive inefficiency due to long-term disengagement. As well, Greg really enjoyed the dynamic assessment experience.
Research outcomes using the Coolabah Dynamic Assessment method

The method
The original research that developed and validated the CDA was a PhD study completed at the University of New England (Chaffey, 2002).

The participants
The researcher used the CDA to assess 79 Aboriginal children, from Years 3, 4 and 5, from rural and regional towns in northern New South Wales. It was decided to focus on Aboriginal children because of this cultural group’s academic underachievement and under-representation in programs for the gifted.

The methodology
To ensure that the CDA outcomes were not simply practice effects, half of the Total Group were randomly placed in a Control Group. The Intervention Group received the full CDA intervention whereas the Control Group received a placebo intervention that only appeared similar in nature.

Results

Group data and discussion
The RSPM has a total of 60 questions. In order to make comparisons within the study group, and with the wider Australian population, the scores are reported here as raw scores out of 60 and as percentile bands derived from RSPM norms (see Table 1). Gain scores from pre-test to post-test are also presented, in Table 2.

Table 1: Control and Intervention Group mean raw score and mean percentile bands from pre-test to post-test

<table>
<thead>
<tr>
<th>CDA</th>
<th>Intervention Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw</td>
<td>Percentile band</td>
</tr>
<tr>
<td>Pre-test mean</td>
<td>27.85</td>
<td>29.9</td>
</tr>
<tr>
<td>Post-test mean</td>
<td>36.24</td>
<td>54.4</td>
</tr>
</tbody>
</table>
Table 2: Control and Intervention Groups mean raw score gain from pre-test to post-test

<table>
<thead>
<tr>
<th>CDA</th>
<th>Intervention Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean gain pre-test to post-test</td>
<td>8.39</td>
<td>2.79</td>
</tr>
</tbody>
</table>

Tables 1 and 2 report a number of interesting data:

- **The pre-test scores are very low, even though a relatively culture fair test was used.**
  **Implications:** This strongly suggests that the underachievement on the pre-test was not due to the nature of the test, but to factors dealt with in the intervention, that is, socio-emotional and cognitive issues. Therefore, even relatively culture-fair tests are not likely to be much better than any other assessment method in identifying giftedness in some ‘at risk’ groups, a view supported by other recent research (Lidz & Macrine, 2001; Tzuriel & Feuerstein, 1992).

- **The Control Group gain from pre-test to post-test was very small compared with that of the Intervention Group.**
  **Implications:** The CDA intervention was responsible for the large gains made by the Intervention Group. The small gains made by the Control Group strongly suggest that the practice effect of doing the RSPM twice is small and not significant.

- **The mean Intervention Group percentile band score at post-test (54.49) suggests that this group had performed as an average group of children.**
  **Implications:** The pre-test score represented a significant underachievement compared to the group’s academic potential as revealed by the CDA. Following the CDA intervention the group performed as an average group in our society.

- **The gain from pre-test to post-test for the Intervention Group is statistically significant (p<.0001).**
  **Implications:** The likelihood of these results occurring by chance is very low (less than 1 chance in 10,000).

- **The difference between the Control Group and Intervention Group at post-test is statistically significant (p<.0001).**
  **Implications:** The likelihood of these results occurring by chance is very low (less than 1 chance in 10,000).
Individual data and discussion

Assessment for identification purposes is necessarily an individual process. Therefore it is useful to examine individual scores in this study. The pre-test and post-test raw scores and percentile bands for gifted children in the Intervention Group are presented below in Table 3. The 90th percentile band, as recommended by Gagné (1995), was used to define the ‘Gifted’ Group.

Table 3: Raw scores and percentile bands of the ‘Gifted’ Group at pre-test and post-test

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th></th>
<th>Post-test</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw score</td>
<td>Percentile band</td>
<td>Raw score</td>
<td>Percentile band</td>
<td>Gain</td>
</tr>
<tr>
<td>Terry</td>
<td>23</td>
<td>26%</td>
<td>45</td>
<td>96%</td>
<td>22</td>
</tr>
<tr>
<td>Adam</td>
<td>21</td>
<td>18%</td>
<td>44</td>
<td>91%</td>
<td>23</td>
</tr>
<tr>
<td>Kate</td>
<td>35</td>
<td>58%</td>
<td>43</td>
<td>91%</td>
<td>8</td>
</tr>
<tr>
<td>Ian</td>
<td>45</td>
<td>86%</td>
<td>50</td>
<td>97%</td>
<td>5</td>
</tr>
<tr>
<td>Leisha</td>
<td>41</td>
<td>81%</td>
<td>45</td>
<td>93%</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 3 provides a number of interesting data.

- **At pre-test none of the Intervention Group, nor of the Control Group, reached the 90% ‘gifted’ benchmark.**
  
  **Implications:** Even using a widely recommended, relatively culture fair test none of these children would have been identified as gifted without the CDA intervention.

- **Following the CDA intervention five of the Intervention Group members reached the ‘gifted’ benchmark.**
  
  **Implications:** The CDA was successful in identifying previously unidentified ‘invisible’ gifted underachievers. If a one-off application of the RSPM (the pre-test) were used as an identification tool none of the 79 children in the study would have been identified as gifted using the 90% benchmark.
• The pre-test scores of Terry and Adam were very low.

**Implications:** If these scores were taken as a one-off measure, as is often done, these boys could easily have been labelled as having low learning potential. The CDA demonstrated that the pre-test results were an enormous underachievement.

**In summary**

The CDA was successful in identifying gifted students from a group who have both underachieved academically in school and participated little in gifted education programs. Further, gifted children have been revealed in this sample in approximately the same proportions as in the general population.

**General individual data**

Although the CDA is designed to provide a better way of identifying gifted underachievers, another very useful outcome occurred in this study. Substantial numbers of children who did not achieve the gifted benchmark, or achieved at low levels at pre-test, made large gains at post-test, demonstrating much higher learning potential than expected. This knowledge, in the general school setting, has great potential to help both the student and the teacher. We will illustrate this point with the case of Erin.

> Erin was nine years old at the time she was assessed with the CDA. Erin had pre-tested at the 37th percentile band, a score that fitted with her classroom teacher’s estimate of performance and potential.

> However, at post-test Erin progressed strongly to the 78th percentile band. While not moving her into a gifted band, this outcome triggered inquiries by her parents which ended with her paediatrician suggesting that premature birth is sometimes accompanied by cognitive delay — for Erin had experienced a very premature birth.

> Over the last two years (since her assessment) Erin has progressed steadily and is now achieving in class much closer to her cognitive potential as revealed by the CDA.
Further research using the CDA

Further research using the CDA has revealed similar findings in a number of different groups, in both Australia and Canada.

- A pilot assessment of mainstream Year 3 students in Australia has revealed a surprisingly high proportion of 'invisible' underachievers.
- A pilot program to assess Canadian Indigenous children has revealed a substantial number of 'invisible' underachievers (Chaffey, McCluskey & Halliwell, Under review).

Three major identification projects using the CDA as the central tool are planned for English as a Second Language (ESL), Australian Aboriginal and mainstream children. Details of the findings from these will be published as they become available.
Reflective/Practical Component

1. List the benefits that may result from identifying any ‘invisible’ gifted underachievers in your class.
2. List the difficulties that may result from identifying any ‘invisible’ gifted underachievers in your class.
3. Consider what strategies you might employ to address the needs of any ‘invisible’ gifted underachievers in your class.

In groups of three or four:

1. List and discuss the benefits that may result from identifying any ‘invisible’ gifted underachievers in your class.
2. List and discuss the difficulties that may result from identifying any ‘invisible’ gifted underachievers in your class.
3. Consider and discuss what strategies you might employ to cater for any ‘invisible’ gifted underachievers in your class.

1. List the benefits that may result from identifying any ‘invisible’ gifted underachievers in your school.
2. List the difficulties that may result from identifying any ‘invisible’ gifted underachievers in your school.
3. Consider what strategies you might employ to cater for any ‘invisible’ gifted underachievers in your school.
Catering for the gifted underachiever

In the Core and Extension levels of Module 4 information has been provided that is designed to assist the classroom teacher to cater better for the gifted underachievers — both visible and invisible — in the classroom. In Part 2 of the Extension Level of Module 4 the issue of gifted children with learning disabilities is discussed along with more depth and actual classroom strategies for helping gifted children with low academic self-efficacy. Section 2 is finalised with suggested pathways for assisting gifted Indigenous students reach their academic potential.

Unfortunately, there are no ‘magic bullets’ that will suddenly reverse underachievement. However, understanding the issues that contribute to underachievement is a necessary starting point and will allow you to make meaningful, positive steps. Perseverence and patience are then needed.

Working with gifted students with learning disabilities

Gifted children with learning disabilities have been described as twice-exceptional as they are different from the norm in two ways (Moon & Reis, 2004). The incidence of learning disabilities in the gifted population is at least as high (10-15%) as in the rest of the population (Silverman, 2003). However, ‘recognition of this group has been hindered by the common perception that giftedness equates with academic achievement’ (Silverman, 2003, p. 533). This issue is complicated by the fact that gifted learning disabled (GLD) children often cope in schools, as their high intellectual ability allows them to partially compensate for their disability. However, these children rarely achieve to their potential.

Silverman (2003) notes, with concern, that GLD children are too often unrecognised as such and poor or different behaviours are related to a ‘lazy’ or unmotivated child. It is useful at this point to make the link with low academic self-efficacy and GLD children. In the Core and Extension levels of Module 4 it was noted that key symptoms of low academic self-efficacy were low motivation, tentative or non-engagement and poor persistence. Is this Silverman’s ‘lazy and unmotivated child’?
GLD children are also disadvantaged with respect to provision for gifted students. IQ test scores for GLD children are usually depressed due to problems associated with their learning disability, preventing them from qualifying for programs for the gifted. Further, teacher-centred identification methods (for more details on identification practices refer to Module 2) are highly unlikely to result in the nomination of a child who has major problems in classroom basics, or who seems uninterested and unmotivated.

To help you to recognise and understand GLD children, key aspects of the most prevalent types of learning disabilities are presented.
Common learning disabilities in gifted students

Silverman (2003) has identified six major learning disabilities that are common in gifted children. These are presented, along with definitions and symptoms in Table 4, below.

Table 4. Common learning disabilities, definitions and symptoms

<table>
<thead>
<tr>
<th>Learning Disability</th>
<th>What is it?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensory integration dysfunction</td>
<td>This involves a dysfunction in the organisation of sensations that enable the brain to make sense of the environment.</td>
</tr>
<tr>
<td>Auditory processing disorder</td>
<td>The inability to hear effectively or process sounds.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fine motor difficulties such as writing or drawing.</td>
</tr>
<tr>
<td>• Gross motor difficulties such as throwing and catching.</td>
</tr>
<tr>
<td>• Intense reactions to sensory stimuli such as sound, light, touch, smell and taste.</td>
</tr>
<tr>
<td>• Often due to chronic ear infections (otitis media). This makes gifted Indigenous children particularly prone to this problem due to the extraordinarily high prevalence of otitis media in Aboriginal children. Indigenous children in Canada and the USA experience similar problems.</td>
</tr>
<tr>
<td>• Gifted children may mask their hearing loss with compensating strategies.</td>
</tr>
<tr>
<td>• They are often inattentive, don’t follow instructions and copy others to find out what to do.</td>
</tr>
<tr>
<td>• Loud noise will cause pain so they are uncomfortable in noisy settings.</td>
</tr>
<tr>
<td>• Poor development in motor sequencing skill associated with reading and writing.</td>
</tr>
<tr>
<td>• Poor motor skill development often linked.</td>
</tr>
<tr>
<td>• Highly developed oral skill and visual-spatial ability.</td>
</tr>
</tbody>
</table>
### Visual processing disorder

The inability to see well.

- Gifted children may escape early detection due to their ability to compensate.
- Specific symptoms include double vision, blurred vision, closing one eye, being very close to watch or read, and difficulty in writing or spelling.
- An early reader suddenly stops reading when the print in ‘bigger kids’ books becomes smaller.

### Attention Deficit Hyperactivity Disorder (ADHD)

Silvermann (2003) identifies two types.

#### Type 1: Hyperactive and impulsive

- Hyperactive with poor attention. Diagnosis is often controversial due to the large number of children placed on medication.
- Is usually obvious from an early age (before seven).
- Have difficulty making friends as they find it difficult to understand social cues.
- Usually socially and emotionally immature, with poor self-regulation.

#### Type 2: Inattentive

- As this type of behaviour is less obvious it may not become evident until early high school.
- Very difficult to diagnose, especially in girls.
- They have problems organising themselves. Schoolwork is often not completed.
- Have difficulty making friends as they find it difficult to understand social cues.
<table>
<thead>
<tr>
<th>Dyslexia</th>
<th>Is the result of a variety of processing problems that inhibit the development of reading skills.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Is associated with phonological impairments.</td>
</tr>
<tr>
<td></td>
<td>• The child is often a strong visual-spatial learner.</td>
</tr>
<tr>
<td></td>
<td>• Will have major reading problems.</td>
</tr>
<tr>
<td></td>
<td>• Letters are confused and often mixed up.</td>
</tr>
<tr>
<td></td>
<td>• They often think in pictures so frequently can’t show how they achieved an answer.</td>
</tr>
<tr>
<td></td>
<td>• If given support dyslexic children may demonstrate high ability in creative tasks associated with their visual capacity. After all, Albert Einstein and Leonardo da Vinci were dyslexic!</td>
</tr>
<tr>
<td></td>
<td>• Is often associated with writing disability (dysgraphia), poor rote memory, poor spelling and language mechanics.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nonverbal learning disorder (Spatial disorientation)</th>
<th>Experience a serious problem in negotiating space. In many ways this problem is the mirror image of dyslexia.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Experience serious problems with visual-spatial organisation, nonverbal problem solving and psychomotor efficiency.</td>
</tr>
<tr>
<td></td>
<td>• Problems they may experience include getting lost easily, missing social cues, tending to be clumsy, being unable to visualise and having difficulty adapting to new situations.</td>
</tr>
<tr>
<td></td>
<td>• Are often strong in verbal-sequential tasks such as written tasks and spelling.</td>
</tr>
</tbody>
</table>

Silverman (2003, pp. 534-538)
An additional note on ADHD

- Ken and Andrea McCluskey, at the University of Winnipeg, Canada, have produced an outstanding text on this subject (McCluskey & McCluskey, 2001). It is designed for teachers and links personal experience with scholarly research evidence, providing practical insights that can only emerge from family experience that has seen the McCluskeys’ ADHD daughter, Amber, emerge as an achieving gifted adult and mother.

Diagnosing writing disabilities

A very bright child who hates to write is a common expression of a learning disability (Silverman, 2003). Consequently a diagnostic checklist, developed by Silverman (2003), to help recognise a writing disability is presented below.

Diagnostic checklist of writing disability

If you can answer ‘yes’ to 10 or 11 of these questions the children should be assessed for a writing disability (Silverman, 2003, pp. 540-541).

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is their writing posture awkward?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Do they hold their pencil strangely?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Can you see the tension run through their hand, arm or furrowed brow?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Does it take them much longer to write than anyone else their age?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Do they fatigue easily and want to quit?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Do they space their letters on the paper in an unusual way</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(too close, too far apart, no spaces between words)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Do they form their letters oddly (e.g., starting letters at the top</td>
<td></td>
<td></td>
</tr>
<tr>
<td>where others would start at the bottom)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Do they mix upper- and lower-case letters?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Do they mix cursive and manuscript letters?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Are their cursive letters disconnected?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Do they prefer manuscript to cursive?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Does their lettering lack fluidity?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Do they still reverse letters after age seven?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Is their handwriting illegible?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
15. Are they very poor spellers?
16. Do they avoid writing words they can’t spell?
17. Do they leave off the endings of words?
18. Do they confuse singular and plural?
19. Do they mix up small words, like ‘the’ and ‘they’?
20. Do they leave out soft sounds, like the ‘d’ in gardener?
21. Is their grasp of phonics weak?

(Silverman, 2003, pp. 540-541).

Strategies for helping the GLD student

Silverman (2003, pp. 541-542) has recommended a number of strategies for assisting the GLD child. Three general principles underpin the suggested strategies.

- The first, and most important principle, is to identify the learning disability as soon as possible. This should be done before the age of nine if remediation strategies are to achieve maximum success.
- The second principle is that you should always teach to the child's strengths.
- The third principle is that compensation strategies should be actively sought, whatever the disability.

Strategies include:

- Individual education programs (IEPs) need to be developed (see Extension Module 6 for details of this process). The programs should enhance the student’s strengths as well as make adaptations for his or her weaknesses.
- Timed tests or tasks should be avoided where possible, as GLD children usually have compromised processing speeds.
- Allowing students with writing disabilities to use a computer for written tasks will be a great help. In severe cases a voice-activated computer may be necessary. Generally, technological aids should be used wherever possible.
- Many GLD children think in pictures. Hands-on learning and visual presentations are vital to their learning.
• Part of being a visual learner is that they are whole-part learners rather than sequential learners. Therefore, it is important that correct answers be accepted even if the steps cannot be demonstrated.

• Help the student learn visualisation skills.

• Written assignments should be minimised. Oral exams and reporting are useful substitutes.

• Don’t lower marks due to mechanical problems such as spelling or sentence structure.

• Acceleration may be a useful option for GLD children if they handle complex tasks easily. The ‘simple’ tasks may defeat them but they may thrive on the more complex learning that acceleration can provide.

(If considering the acceleration option reread thoroughly the recommended guidelines and practices for acceleration in Core and Extension Modules 6.)

Underachievement and low academic self-efficacy

The chicken or the egg?

Low academic self-efficacy can act as either a primary or a secondary source of underachievement. That is, low academic self-efficacy can lead directly to academic underachievement (act as a primary source) or it may develop as the result of specific experiences or conditions (act as a secondary source).

This point is illustrated by the following case studies, of Liam and Kate.

Liam
Liam is a gifted learning disabled child. He comes from a background where books abound and education is valued. His mother and father are both teachers. Liam experienced extreme difficulties developing his literacy skills and rapidly fell behind at school. He experienced little success despite his best efforts and now exhibits signs of low academic self-efficacy, almost certainly triggered by a lack of mastery experiences, due to his learning disability. In Liam’s case, low academic self-efficacy is a secondary source of underachievement as it developed as a result of poor mastery from another source. However, the low academic self-efficacy has now become a specific source of underachievement as well.

Kate
Kate comes from a home where books are rare and education is little valued. She rarely encounters positive academic role models in her daily life. Kate began her schooling eagerly but quickly realised that she did not know as much as the others. Disengagement began before the end of Kindergarten/Reception. Kate actually began her school life with low academic self-efficacy due to a lack of pre-school mastery experiences and positive academic vicarious experiences. However, Kate was identified as an academically gifted child when eight years old. In Kate’s case, low academic self-efficacy was a primary source of underachievement.
An important point to note here is that children from all backgrounds can develop low academic self-efficacy. Once established, low academic self-efficacy will result in poor task engagement, lessened persistence and low resilience with respect to academic tasks. Low academic self-efficacy can be a powerful, self-reinforcing talent mask that will inhibit academic achievement.

Whenever children are the subject of influences that lead to academic underachievement, one of the likely casualties is their self-belief (self-efficacy) that they can achieve academically (as we discussed in Core and Extension Modules 4). Consequently, a very good starting point in attempts to reverse underachievement is often the adoption of strategies that target self-efficacy enhancement. The specific causes of underachievement will need to be specifically dealt with as well, but self-efficacy is a fine starting point. The three major contributors to self-efficacy — that is, mastery experiences, vicarious experience and verbal persuasion (Bandura, 2003) — should be the target.
Strategies for enhancing academic self-efficacy in underachievers

Enhancing academic self-efficacy through mastery experiences

A cognitively engaged gifted child is on the way to reaching his or her academic potential. The hoped for outcomes in enhancing low academic self-efficacy are the development of engagement, persistence, resilience and the intrinsic motivation that accompanies self-belief.

A student who won’t engage in an academic task, or who engages reluctantly and with little persistence, is doing so for a reason.

Consequently, a concerted effort by the teacher to reverse the situation will be necessary. You will have to be patient, persistent and not give up. That is, your self-efficacy as a teacher will be tested!

The tasks

Selecting suitable tasks that are designed to provide constant success is essential. These tasks should:

• begin at a difficulty level considerably below the expected performance level of the child.
• be graded so that the degree of difficulty increases slowly.
• ensure that the child achieves success at every task.
• be visual for those who are strong visual-spatial learners.
• if possible, be perceived as ‘fun’ by the child. (Chaffey, 2002)

Ensuring mastery

To ensure that the child is successful with the mastery tasks a number of strategies are required:

• Carefully explain what is required in the task so that the child does not see ‘demons’ that don’t exist.
• If the child needs support to reach a solution provide just enough scaffolding to ensure success.

Avoid directly giving solutions — the child needs to provide the cognition. Scaffolding requires the teacher to provide direction and links, to allow the child to move from what she knows to new understandings.
• **Slow the child down.** A child rushing to finish (acting impulsively) is highly unlikely to engage effectively in the cognitive process.

• Provide **performance and attributional feedback, a major source of verbal persuasion**, following successful mastery experiences (Bandura, 2003).

  **Performance feedback** involves explaining to the students that their success was due to the process followed. This type of feedback should contain a careful reiteration of the steps that led to the success.

  **Attributional feedback** is designed to ensure that the students understand that their achievements were the result of their effort and ability.

• Closely linked to feedback is the provision of **appropriate praise**. Brophy (1981) suggests a number of strategies for enhancing praise, eg:
  
  — The accomplishment is specifically identified.
  
  — Information is conveyed to the student regarding the particular student competence that led to success.
  
  — Praise is delivered only when it is deserved and has a clear focus.

  Unearned praise is quickly recognised by the gifted child and may result in a negative effect on his engagement due to loss of trust.

• Following a successful mastery experience allow the child to explain to you (verbalise) how she reached the solution. This approach also supports the development of self-efficacy through the self-confirmation that the student really understood the process (Carlson & Wiedl, 1979). Teacher confirmation should follow the child’s verbalisation.

  As Piaget (Source unknown) noted ‘Children will only verbalise what they can deal with conceptually.’

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**The learning environment**

It is essential to keep the whole process as stress free as possible. This may mean establishing or deepening trust, removing the fear of failure and the fear of doing too well (recall from Core Module 4 and Core Module 1 the forced-choice dilemma and the effect of stress generally). These socio-emotional issues may act as barriers to the mastery process.
Enhancing academic self-efficacy through vicarious experiences

‘Efficacy appraisals are partly influenced by vicarious experiences mediated by modelled attainments. So modelling serves as another effective tool for promoting a sense of personal [self] efficacy’ (Bandura, 2003, p. 86)

The effect of modelled experience on self-efficacy is well documented. By observing other people succeed, individuals may feel success is more possible for them and increases in efficacy expectation may result. Bandura (2003) found that while vicarious experience is an important source of self-efficacy it is not as powerful as mastery.

Strategies for facilitating vicarious experiences

Providing the student with appropriate adult and peer role models is your goal. If you wish to influence the student’s academic self-efficacy then the role model must be successful in the academic domain. However, there is a need to provide a broad match between the role model and the child. For example:

Lawrence, aged 11 and of middle eastern origin, is an exceptional soccer player and is academically gifted. However, he also displays signs of very low academic self-efficacy.

Lawrence’s teacher has decided to link him to a role model in the hope that the vicarious experience will enhance his academic self-efficacy. Lawrence’s teacher has chosen as role model a male of the same cultural background, academically successful and an architect by profession. This man also plays first division soccer.

Lawrence’s teacher felt that the vicarious experience may be far more successful on the academic level if Lawrence can first relate to the role model culturally and in the sporting domain.
The teacher as a source of vicarious experience

Teachers are a potentially powerful source of vicarious experience for students. They are natural role models for their class members and when students perceive that the teacher values and respects them, in the academic sense, academic self-efficacy growth is likely. However, the teachers’ power as a source of vicarious experience very much depends on how each individual student relates to them. Bandura (2003, p. 87) comments:

‘The greater the assumed similarity, the more persuasive are the model’s successes and failures. If people see the models as very different from themselves, their beliefs of personal efficacy [self-efficacy] are not much influenced by the model's behaviour and the results it produces.’

Teachers’ ability to influence the academic self-belief of their students is further highlighted by the effect of appropriate feedback. Bandura (2003, p. 101) notes:

‘It is easier to sustain a sense of efficacy [self-belief], especially when struggling with difficulties, if significant others express faith in one’s capabilities than if they convey doubts.’

The message is clear. Teachers must become trusted, accepted ‘significant others’ if they are to be successful vicarious experience sources for students. This is especially so for children from culturally diverse and/or low SES backgrounds.

Peer role models

Providing links with academically successful peers with whom the child can relate is another useful strategy. This form of vicarious experience has great potential, as peer pressure, in a negative sense, is often a major problem for the gifted child. This may be particularly strong for children from backgrounds where education is not highly valued or educational experiences have historically been largely negative.
Assisting Aboriginal children to overcome involuntary minority status issues

Indigenous Australian children experience greater levels of academic underachievement than their mainstream peers. It is reasonable to assume that this is the result of the lingering effect of long-term educational disadvantage, as revealed in Extension Module 4 where involuntary minority status issues were discussed. To overcome this uniquely Aboriginal issue, strategies are needed that focus on problems related to involuntary minority status (Ogbu, 1994).

Strategies for enhancing inclusion of the Indigenous community in the school

The source of the oppositional attitudes and mistrust of education that exists in many Indigenous communities is the long-term educational disadvantage experienced by members of these communities. In theory, these barriers have been lowered. However, the impact of long-term disadvantage is still carried in the form of secondary cultural traits that continue to propagate a mistrust in, and general oppositional attitude towards, education. These barriers are not easily shifted.

The answer lies in providing a school environment that is genuinely inclusive of the Aboriginal community.

The inclusion needs to be deep and genuine or the result may well be a deepening of mistrust by the Indigenous community.

Key strategies to enhance inclusion and trust in the school system

- The necessary first step is to contact the local Indigenous community and invite the elders and other senior community members to discuss your intentions and to create a joint plan.

- It is important for teachers to understand Indigenous issues, including the history of involuntary minority status and its effect on educational outcomes. Teachers need to hold expectations that, with the right guidance and opportunities, Indigenous students will achieve academically at similar levels to those of the wider community. A strong understanding of, and partnership with, the Indigenous community will make this much more likely.

As reported in Part 1, research using Coolabah Dynamic Assessment (Chaffey, 2002) has demonstrated the extent to which Indigenous children are underachieving academically. Further, this research identified gifted Indigenous children in the same proportion as in the wider community.
Strategies for defusing the forced-choice dilemma

The oppositional attitudes toward education generated by long-term educational disadvantage have meant that gifted Indigenous children are often in the grip of a powerful forced-choice dilemma. Doing well academically may mean losing favour in their community, especially among their age peers, an outcome that few Indigenous children would choose (Sharon Cooke, Personal communication, 2004). Strategies for weakening the forced-choice dilemma which gifted Indigenous children too often experience, must come from attacking the source.

- **What you must not do** is to try to remove or alienate the students from their community or peers. The likely outcome would be a worsening of the situation.

- **The long-term answer** is to work on community trust and real inclusion in the educational process (as discussed above). This will gradually increase the Indigenous community’s acceptance of your school and decrease oppositional attitudes. The forced-choice dilemma will equivalently weaken.

- If a powerful forced-choice dilemma exists, **short-term answers** are necessary so that gifted students can meaningfully participate, despite pressures not to stand out academically. Solving this problem is not simple, as it is deeply ingrained. Some positive strategies are:
  
  - Do not make the child stand out if he does well academically.
    Keep praise and recognition on a more personal level.
  
  - Work hard to establish trust.

  - Let the child know that you believe she has lots of ability and that you are prepared to help her.

  - Be patient. Little will be gained until trust is established.

Billy, a 10-year-old Aboriginal boy, was described by his Principal, Mr Long, as the ‘academically brightest child’ he had ever taught. With the best intentions, Mr Long actively began to praise Billy publicly for his academic abilities and to ensure that every outstanding piece of work was recognised with awards at assembly. Mr Long noticed that soon after receiving these rewards, Billy was in trouble or absent from school.

**What was happening?**

Billy was the victim of a powerful forced-choice dilemma. Every academic award was followed by teasing and bullying by his peers. Mr Long believes Billy regained favour with his mates by displaying oppositional behaviours towards school.
Developing academic self-efficacy

For many gifted Indigenous students low academic self-efficacy is a major talent mask and inhibits academic development (Chaffey, 2002, 2004; Lovaglia, Lucas, Houser, Thye, & Markovsky, 1998).

Consequently, employing strategies to enhance academic self-efficacy is a necessary step to enable many Indigenous children to reach their academic potential.

In Core and Extension Modules 4, and earlier in this Specialisation Module, the issue of academic self-efficacy was discussed, do’s and don’ts reviewed and strategies presented. The appropriate sections of the above Modules should now be reviewed in order to develop a pathway to enhance the academic self-efficacy of your Indigenous children. You will be delighted and, at times, surprised by the outcomes.
Self-Assessment/Practical Reflection

1. **Coolabah Dynamic Assessment**
   - Briefly outline the key components of the Coolabah Dynamic Assessment method.
   - What are the advantages of the CDA over other identification methods for gifted ‘invisible’ underachievers?

2. **Action plan for working with GLD students**
   Since 10-15% of gifted students may have some form of learning disability a plan to cater for these students in your class is desirable. Outline a classroom plan to help acknowledge, and address the needs of, GLD students.

3. **Action plan for enhancing academic self-efficacy**
   Outline a plan to address low academic self-efficacy in your classroom.

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1. **Coolabah Dynamic Assessment**
   - Briefly outline the key components of the Coolabah Dynamic Assessment method.
   - What are the advantages of the CDA over other identification methods for gifted ‘invisible’ underachievers?

2. **Action plan for working with GLD students**
   Since 10-15% of gifted students may have some form of learning disability a plan to cater for these students in your school is desirable. Outline a whole-school plan to help acknowledge, and address the needs of, GLD students.

3. **Action plan for enhancing academic self-efficacy across the school**
   Outline a whole-school plan to ensure that low academic self-efficacy is not a problem in your school.
Resources

References and Further Reading


Websites

Gifted Learning Disabled Children and acceleration at: http://www.nationdeceived.org/
Bandura and self-efficacy at: http://www.emory.edu/EDUCATION/mfp/self-efficacy.html
Module 4

Dr Graham Chaffey
Welcome to Specialisation Module 4. In this Module we will investigate a number of different aspects of underachievement:

- Coolabah Dynamic Assessment (CDA), a recent methodology that shows considerable promise in identifying gifted underachievers, especially 'invisible' underachievers.
- the examination of classroom and school strategies that will assist in reversing and preventing underachievement. This will include a synthesis of the factors implicated in underachievement that have been discussed in the Core and Extension levels of Module 4.
- key issues concerning catering effectively for gifted learning disabled children.

Dr Graham Chaffey
# Other Issues in Understanding Underachievement in Gifted Students

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Outcomes

At the completion of this Specialisation Module you will:

- increase your familiarity with CDA as a new way of identifying and understanding gifted ‘invisible’ underachievers.
- understand and have access to strategies that can help teachers reverse and prevent underachievement.
- realise that learning disabilities may mask the academic gifts of many children.

Understanding this will help you to deal with these students in ways that assist them to work towards their true potential.
Coolabah Dynamic Assessment: Identifying ‘invisible’ gifted underachievers

In the Core, Extension and Specialisation levels of Module 2 we have provided a broad overview of a range of traditional methods used to identify academically gifted children. The principle of using multiple identification methods has been emphasised because not all children demonstrate their academic potential through any one method. One group discussed in Core Module 4, ‘invisible’ underachievers, have proved difficult to identify in the past as they actually perform below potential on the most regularly used methods, namely one-off IQ tests and teacher-centred subjective assessments.

However, dynamic assessment methods are showing great promise in identifying gifted ‘invisible’ underachievers, students who have remained unidentified in our schools. In Part 1 of this Specialisation Module an in-depth look at the Coolabah Dynamic Assessment (CDA) method, a product of recent Australian research, is presented.

Why is dynamic assessment desirable as an identification tool?

The underrepresentation of children from culturally diverse and low socio-economic status groups in programs for gifted students (Taylor, 1998) is an issue that needs to be addressed. The Coolabah Dynamic Assessment method shows considerable promise in identifying gifted children from these backgrounds where commonly used methods have, too often, failed.

Some gifted students who underperform in the classroom also perform below their potential in identification tasks such as IQ tests and teacher-centred methods. These students, often from culturally diverse or disadvantaged backgrounds, were discussed in Core Module 4 as gifted ‘invisible’ underachievers. They underperform due to a variety of reasons, such as a powerful forced-choice dilemma, a serious problem with academic self-belief leading to poor task engagement, or a fear of failure. These and other issues were discussed in Core Modules 3 and 4. For these children, we need to look behind the talent masks — and Coolabah Dynamic Assessment is designed to do just that.
The CDA method targets both socio-emotional and cognitive factors implicated in the underachievement of some gifted children. By nullifying these talent masks the true academic potential of gifted ‘invisible’ underachievers may be revealed. There is research evidence (Chaffey, Bailey & Vine, 2003) that CDA can succeed with ‘invisible’ underachievers where one-off traditional methods fail, as it seeks to optimise rather than just sample cognitive performance. A clearer picture of a child’s cognitive potential is thus revealed.

Consider the case of Jane.

Jane was nine years old when she was assessed using the CDA. On the pre-test she scored at the 57th percentile band. Following intervention, where she excelled, Jane attained the 96th percentile band. Interviews with Jane, her teacher and her mother revealed that it was likely that the weak pre-test score was the result of a powerful forced-choice dilemma. Jane simply did not want to stand out, in an academic sense, from her mates.

The CDA had been successful in removing this talent mask and revealing a gifted child. Jane’s teacher was delighted and not at all surprised by the outcome.

What is dynamic assessment?

Dynamic assessment is a method that assumes that some individuals can achieve much more cognitively if given the opportunity to work with a ‘significant other’ to enhance their cognitive efficiency.

Lidz (1997, p. 281) defined dynamic assessment as:

‘approaches to the development of decision-specific information that most characteristically involve interaction between the examiner and examinee, focus on learner metacognitive processes and responsiveness to intervention, and follow a pre-test–intervention–post-test administrative format.’
Generally, dynamic assessment methods follow three steps:

- A **suitable pre-test** is given to gain an idea of the child’s present level of cognitive functioning.
- An **intervention** follows where the child interacts with a trusted adult in a way designed to enhance metacognition and cognitive efficiency generally.
- Finally, a **post-test** (usually the same as the pre-test) is given to determine the impact of the intervention.

**Those who perform to their cognitive potential at pre-test will make only small gains, if any, at post-test. However, those who substantially underperform on the pre-test have the potential to show large gains at post-test.**

To illustrate this point, consider the case of Alison and Marla. Both girls were nine years old, and part of a group being assessed using the CDA.

At pre-test both girls scored at the 45th percentile band. However, following intervention a remarkable change occurred. Alison’s score rose to a level suggesting that she was capable of performing at the 92nd percentile band (ie in the gifted range) while Marla’s post-test score moved up only marginally.

Alison was revealed as a gifted ‘invisible’ underachiever — with much higher academic potential than her current performance indicated — while Marla was likely to be working close to her potential.
Dynamic assessment — a change in approach

Essentially, dynamic assessment seeks to optimise, rather than simply sample, cognitive functioning and it is here that a paradigm shift (a shift in the basic way we think about an issue) in intellectual assessment is apparent (Grigorenko & Sternberg, 1998, p. 77; Lidz, 1997, p. 291).

Explaining the significance of the paradigm shift, Tzuriel & Feuerstein (1992, pp. 187–188) state that:

‘The assessment of cognitive modifiability requires an investment in attacking the cognitive impairments, deficient learning habits, and motivational patterns that are responsible for the poor performance. This assessment has special significance for disadvantaged and special needs children, who are jeopardized by conventional psychometric methods.’

Students who may perform poorly initially in a dynamic assessment procedure are not labelled on that basis as this represents a starting point only in their intellectual assessment. Lidz (1997, p. 282) explains:

‘Dynamic assessment begins where traditional psychometric assessment ends. Instead of terminating the procedure with the establishment of a ceiling, the dynamic assessor views the ceiling as an area of functioning that warrants exploration.’
The Coolabah Dynamic Assessment method

The Coolabah Dynamic Assessment (CDA) method (Chaffey, 2003) has been designed as an identification tool for ‘invisible’ gifted underachievers, aged eight to eleven years. The CDA has a classic pre-test-intervention-post-test design, with an intervention that specifically targets factors implicated in the underachievement of gifted children, especially those from culturally diverse and low SES backgrounds.

The pre-test and post-test

The pre-test/post-test chosen for the CDA is Raven’s Standard Progressive Matrices (RSPM). This measure was chosen for the following reasons:

- It is considered an excellent measure of the underlying ability to learn.
- It is considered to be relatively culture fair due to the lack of specific literacy requirements and cultural icons.
- It has sound Australian norms.
- It is perceived by children more as a set of puzzles than as a test, and as fun.
- It does not have a ceiling for children in the 8–11 years age range.

The intervention

The CDA intervention focuses on both cognitive and socio-emotional factors thought to contribute to underachievement in cognitive performance.

Socio-emotional factors

Socio-emotional factors implicated in cognitive underachievement include lack of trust, fear of failure, fear of success and low academic self-efficacy. The CDA intervention has been designed with a key underlying assumption:

If distrust, fear and lack of motivation are not overcome then any attempt to engage the child in meaningful cognitive tasks will be severely compromised.

Consequently, the CDA has specific strategies designed to create a fear- and stress-free environment, that is also great fun and intrinsically motivating.
Cognitive factors

The cognitive component of the intervention comprises the development of metacognitive skills and the enhancement of emerging cognitive processes — remember ‘flow’ and Vygotsky’s Zone of Proximal Development from Extension Module 4. These are achieved by engaging the children in cognitive tasks that are carefully graded in difficulty from extremely simple to a level that challenges the brightest children of this age. Numerous strategies provide metacognitive pathways and self-efficacy enhancement as well as cognitive engagement in the ‘flow zone’.

Self-efficacy

Individuals with low academic self-efficacy will engage reluctantly (if at all) and give up very quickly — **definitely not an approach that will optimise cognitive performance.** Consequently, an overlaying self-efficacy enhancing intervention was developed for the CDA. The key components of these intervention strategies are:

- constant mastery of the cognitive items. This is achieved by providing the minimum level of scaffolding for every child to achieve success.
- vicarious experience developed through the high expectation and trust of the CDA provider, and the success of the whole group.

Time

The intervention takes two hours and is delivered by an accredited CDA provider. Assessments are done in groups of four, which has been found to be the optimal group size for such a process.

An appropriate cultural setting

If the group being assessed has a particular cultural background then care is taken by the CDA provider to be aware of, and address, any specific cultural issues.

The CDA — a win-win for the children

While the primary aim of using the CDA is to reveal ‘invisible’ gifted underachievers, the CDA really is a win-win for every child participating. This is so because:

- every child will develop a range of metacognitive skills.
- every child will undergo a program designed to enhance academic self-efficacy.
- and it is a lot of fun as well as intrinsically rewarding!
Greg was eight years old when he was assessed using the CDA. Greg was described by his teacher as being ‘totally disengaged’ and the CDA provider was advised not to expect too much.

During the early stages of the intervention the teacher’s prophecy, indeed, seemed to be holding true. However, midway through the intervention the self-efficacy and metacognitive strategies began to have an effect and Greg began to engage in the cognitive tasks. His rate of improvement was astounding. Also, Greg was reluctant to leave the room and asked when he could ‘come back to do some more puzzles’.

At pre-test, Greg scored at the 40th percentile band while at post-test he reached the 90th percentile band.

Greg provides a good example of a child with cognitive inefficiency due to long-term disengagement. As well, Greg really enjoyed the dynamic assessment experience.
Research outcomes using the Coolabah Dynamic Assessment method

The method
The original research that developed and validated the CDA was a PhD study completed at the University of New England (Chaffey, 2002).

The participants
The researcher used the CDA to assess 79 Aboriginal children, from Years 3, 4 and 5, from rural and regional towns in northern New South Wales. It was decided to focus on Aboriginal children because of this cultural group’s academic underachievement and under-representation in programs for the gifted.

The methodology
To ensure that the CDA outcomes were not simply practice effects, half of the Total Group were randomly placed in a Control Group. The Intervention Group received the full CDA intervention whereas the Control Group received a placebo intervention that only appeared similar in nature.

Results
Group data and discussion
The RSPM has a total of 60 questions. In order to make comparisons within the study group, and with the wider Australian population, the scores are reported here as raw scores out of 60 and as percentile bands derived from RSPM norms (see Table 1). Gain scores from pre-test to post-test are also presented, in Table 2.

Table 1: Control and Intervention Group mean raw score and mean percentile bands from pre-test to post-test

<table>
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<th>Control Group</th>
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<tr>
<td></td>
<td>Raw</td>
<td>Percentile band</td>
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<tr>
<td>Pre-test mean</td>
<td>27.85</td>
<td>29.9</td>
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<tr>
<td>Post-test mean</td>
<td>36.24</td>
<td>54.4</td>
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Tables 1 and 2 report a number of interesting data:

- **The pre-test scores are very low, even though a relatively culture fair test was used.**
  
  **Implications:** This strongly suggests that the underachievement on the pre-test was not due to the nature of the test, but to factors dealt with in the intervention, that is, socio-emotional and cognitive issues. Therefore, even relatively culture-fair tests are not likely to be much better than any other assessment method in identifying giftedness in some ‘at risk’ groups, a view supported by other recent research (Lidz & Macrine, 2001; Tzuriel & Feuerstein, 1992).

- **The Control Group gain from pre-test to post-test was very small compared with that of the Intervention Group.**
  
  **Implications:** The CDA intervention was responsible for the large gains made by the Intervention Group. The small gains made by the Control Group strongly suggest that the practice effect of doing the RSPM twice is small and not significant.

- **The mean Intervention Group percentile band score at post-test (54.49) suggests that this group had performed as an average group of children.**
  
  **Implications:** The pre-test score represented a significant underachievement compared to the group’s academic potential as revealed by the CDA. Following the CDA intervention the group performed as an average group in our society.

- **The gain from pre-test to post-test for the Intervention Group is statistically significant (p<.0001).**
  
  **Implications:** The likelihood of these results occurring by chance is very low (less than 1 chance in 10,000).

- **The difference between the Control Group and Intervention Group at post-test is statistically significant (p<.0001).**
  
  **Implications:** The likelihood of these results occurring by chance is very low (less than 1 chance in 10,000).

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### Table 2: Control and Intervention Groups mean raw score gain from pre-test to post-test

<table>
<thead>
<tr>
<th>CDA</th>
<th>Intervention Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean gain pre-test to post-test</td>
<td>8.39</td>
<td>2.79</td>
</tr>
</tbody>
</table>

---

---
Individual data and discussion

Assessment for identification purposes is necessarily an individual process. Therefore it is useful to examine individual scores in this study. The pre-test and post-test raw scores and percentile bands for gifted children in the Intervention Group are presented below in Table 3. The 90th percentile band, as recommended by Gagné (1995), was used to define the ‘Gifted’ Group.

Table 3: Raw scores and percentile bands of the ‘Gifted’ Group at pre-test and post-test

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th></th>
<th>Post-test</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw score</td>
<td>Percentile band</td>
<td>Raw score</td>
<td>Percentile band</td>
<td>Gain</td>
</tr>
<tr>
<td>Terry</td>
<td>23</td>
<td>26%</td>
<td>45</td>
<td>96%</td>
<td>22</td>
</tr>
<tr>
<td>Adam</td>
<td>21</td>
<td>18%</td>
<td>44</td>
<td>91%</td>
<td>23</td>
</tr>
<tr>
<td>Kate</td>
<td>35</td>
<td>58%</td>
<td>43</td>
<td>91%</td>
<td>8</td>
</tr>
<tr>
<td>Ian</td>
<td>45</td>
<td>86%</td>
<td>50</td>
<td>97%</td>
<td>5</td>
</tr>
<tr>
<td>Leisha</td>
<td>41</td>
<td>81%</td>
<td>45</td>
<td>93%</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 3 provides a number of interesting data.

- At pre-test none of the Intervention Group, nor of the Control Group, reached the 90% ‘gifted’ benchmark.
  
  Implications: Even using a widely recommended, relatively culture fair test none of these children would have been identified as gifted without the CDA intervention.

- Following the CDA intervention five of the Intervention Group members reached the ‘gifted’ benchmark.
  
  Implications: The CDA was successful in identifying previously unidentified ‘invisible’ gifted underachievers. If a one-off application of the RSPM (the pre-test) were used as an identification tool none of the 79 children in the study would have been identified as gifted using the 90% benchmark.
• The pre-test scores of Terry and Adam were very low.

Implications: If these scores were taken as a one-off measure, as is often done, these boys could easily have been labelled as having low learning potential. The CDA demonstrated that the pre-test results were an enormous underachievement.

In summary

The CDA was successful in identifying gifted students from a group who have both underachieved academically in school and participated little in gifted education programs. Further, gifted children have been revealed in this sample in approximately the same proportions as in the general population.

General individual data

Although the CDA is designed to provide a better way of identifying gifted underachievers, another very useful outcome occurred in this study. Substantial numbers of children who did not achieve the gifted benchmark, or achieved at low levels at pre-test, made large gains at post-test, demonstrating much higher learning potential than expected. This knowledge, in the general school setting, has great potential to help both the student and the teacher. We will illustrate this point with the case of Erin.

Erin was nine years old at the time she was assessed with the CDA. Erin had pre-tested at the 37th percentile band, a score that fitted with her classroom teacher’s estimate of performance and potential.

However, at post-test Erin progressed strongly to the 78th percentile band. While not moving her into a gifted band, this outcome triggered inquiries by her parents which ended with her paediatrician suggesting that premature birth is sometimes accompanied by cognitive delay — for Erin had experienced a very premature birth.

Over the last two years (since her assessment) Erin has progressed steadily and is now achieving in class much closer to her cognitive potential as revealed by the CDA.
Further research using the CDA

Further research using the CDA has revealed similar findings in a number of different groups, in both Australia and Canada.

- A pilot assessment of mainstream Year 3 students in Australia has revealed a surprisingly high proportion of ‘invisible’ underachievers.
- A pilot program to assess Canadian Indigenous children has revealed a substantial number of ‘invisible’ underachievers (Chaffey, McCluskey & Halliwell, Under review).

Three major identification projects using the CDA as the central tool are planned for English as a Second Language (ESL), Australian Aboriginal and mainstream children. Details of the findings from these will be published as they become available.
Reflective/Practical Component

1. List the benefits that may result from identifying any ‘invisible’ gifted underachievers in your class.
2. List the difficulties that may result from identifying any ‘invisible’ gifted underachievers in your class.
3. Consider what strategies you might employ to address the needs of any ‘invisible’ gifted underachievers in your class.

In groups of three or four:

1. List and discuss the benefits that may result from identifying any ‘invisible’ gifted underachievers in your class.
2. List and discuss the difficulties that may result from identifying any ‘invisible’ gifted underachievers in your class.
3. Consider and discuss what strategies you might employ to cater for any ‘invisible’ gifted underachievers in your class.

1. List the benefits that may result from identifying any ‘invisible’ gifted underachievers in your school.
2. List the difficulties that may result from identifying any ‘invisible’ gifted underachievers in your school.
3. Consider what strategies you might employ to cater for any ‘invisible’ gifted underachievers in your school.
Part 2

Catering for the gifted underachiever

In the Core and Extension levels of Module 4 information has been provided that is designed to assist the classroom teacher to cater better for the gifted underachievers — both visible and invisible — in the classroom. In Part 2 of the Extension Level of Module 4 the issue of gifted children with learning disabilities is discussed along with more depth and actual classroom strategies for helping gifted children with low academic self-efficacy. Section 2 is finalised with suggested pathways for assisting gifted Indigenous students reach their academic potential.

Unfortunately, there are no ‘magic bullets’ that will suddenly reverse underachievement. However, understanding the issues that contribute to underachievement is a necessary starting point and will allow you to make meaningful, positive steps. Perseverence and patience are then needed.

Working with gifted students with learning disabilities

Gifted children with learning disabilities have been described as twice-exceptional as they are different from the norm in two ways (Moon & Reis, 2004). The incidence of learning disabilities in the gifted population is at least as high (10-15%) as in the rest of the population (Silverman, 2003). However, ‘recognition of this group has been hindered by the common perception that giftedness equates with academic achievement’ (Silverman, 2003, p. 533). This issue is complicated by the fact that gifted learning disabled (GLD) children often cope in schools, as their high intellectual ability allows them to partially compensate for their disability. However, these children rarely achieve to their potential.

Silverman (2003) notes, with concern, that GLD children are too often unrecognised as such and poor or different behaviours are related to a ‘lazy’ or unmotivated child. It is useful at this point to make the link with low academic self-efficacy and GLD children. In the Core and Extension levels of Module 4 it was noted that key symptoms of low academic self-efficacy were low motivation, tentative or non-engagement and poor persistence. Is this Silverman’s ‘lazy and unmotivated child’?
GLD children are also disadvantaged with respect to provision for gifted students. IQ test scores for GLD children are usually depressed due to problems associated with their learning disability, preventing them from qualifying for programs for the gifted. Further, teacher-centred identification methods (for more details on identification practices refer to Module 2) are highly unlikely to result in the nomination of a child who has major problems in classroom basics, or who seems uninterested and unmotivated.

To help you to recognise and understand GLD children, key aspects of the most prevalent types of learning disabilities are presented.
Common learning disabilities in gifted students

Silverman (2003) has identified six major learning disabilities that are common in gifted children. These are presented, along with definitions and symptoms in Table 4, below.

Table 4. Common learning disabilities, definitions and symptoms

<table>
<thead>
<tr>
<th>Learning Disability</th>
<th>What is it?</th>
<th>Symptoms</th>
</tr>
</thead>
</table>
| Sensory integration dysfunction     | This involves a dysfunction in the organisation of sensations that enable the brain to make sense of the environment. | • Fine motor difficulties such as writing or drawing.   
• Gross motor difficulties such as throwing and catching.  
• Intense reactions to sensory stimuli such as sound, light, touch, smell and taste. |
| Auditory processing disorder        | The inability to hear effectively or process sounds.                        | • Often due to chronic ear infections (otitis media). **This makes gifted Indigenous children particularly prone to this problem due to the extraordinarily high prevalence of otitis media in Aboriginal children.** Indigenous children in Canada and the USA experience similar problems.  
• Gifted children may mask their hearing loss with compensating strategies.  
• They are often inattentive, don’t follow instructions and copy others to find out what to do.  
• Loud noise will cause pain so they are uncomfortable in noisy settings.  
• Poor development in motor sequencing skill associated with reading and writing.  
• Poor motor skill development often linked.  
• Highly developed oral skill and visual-spatial ability. |
| **Visual processing disorder** | The inability to see well. | • Gifted children may escape early detection due to their ability to compensate.  
• Specific symptoms include double vision, blurred vision, closing one eye, being very close to watch or read, and difficulty in writing or spelling.  
• An early reader suddenly stops reading when the print in ‘bigger kids’ books becomes smaller. |

| **Attention Deficit Hyperactivity Disorder (ADHD)** | Silvermann (2003) identifies two types. | **Type 1: Hyperactive and impulsive**  
• Hyperactive with poor attention. Diagnosis is often controversial due to the large number of children placed on medication.  
• Is usually obvious from an early age (before seven).  
• Have difficulty making friends as they find it difficult to understand social cues.  
• Usually socially and emotionally immature, with poor self-regulation.  
**Type 2: Inattentive**  
• As this type of behaviour is less obvious it may not become evident until early high school.  
• Very difficult to diagnose, especially in girls.  
• They have problems organising themselves. Schoolwork is often not completed.  
• Have difficulty making friends as they find it difficult to understand social cues. |
### Dyslexia

<table>
<thead>
<tr>
<th>Is the result of a variety of processing problems that inhibit the development of reading skills.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Is associated with phonological impairments.</td>
</tr>
<tr>
<td>• The child is often a strong visual-spatial learner.</td>
</tr>
<tr>
<td>• Will have major reading problems.</td>
</tr>
<tr>
<td>• Letters are confused and often mixed up.</td>
</tr>
<tr>
<td>• They often think in pictures so frequently can’t show how they achieved an answer.</td>
</tr>
<tr>
<td>• If given support dyslexic children may demonstrate high ability in creative tasks associated with their visual capacity. After all, Albert Einstein and Leonardo da Vinci were dyslexic!</td>
</tr>
<tr>
<td>• Is often associated with writing disability (dysgraphia), poor rote memory, poor spelling and language mechanics.</td>
</tr>
</tbody>
</table>

---

### Nonverbal learning disorder (Spatial disorientation)

<table>
<thead>
<tr>
<th>Experience a serious problem in negotiating space. In many ways this problem is the mirror image of dyslexia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Experience serious problems with visual-spatial organisation, nonverbal problem solving and psychomotor efficiency.</td>
</tr>
<tr>
<td>• Problems they may experience include getting lost easily, missing social cues, tending to be clumsy, being unable to visualise and having difficulty adapting to new situations.</td>
</tr>
<tr>
<td>• Are often strong in verbal-sequential tasks such as written tasks and spelling.</td>
</tr>
</tbody>
</table>

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Silverman (2003, pp. 534-538)
An additional note on ADHD

- Ken and Andrea McCluskey, at the University of Winnipeg, Canada, have produced an outstanding text on this subject (McCluskey & McCluskey, 2001). It is designed for teachers and links personal experience with scholarly research evidence, providing practical insights that can only emerge from family experience that has seen the McCluskeys’ ADHD daughter, Amber, emerge as an achieving gifted adult and mother.

Diagnosing writing disabilities

A very bright child who hates to write is a common expression of a learning disability (Silverman, 2003). Consequently a diagnostic checklist, developed by Silverman (2003), to help recognise a writing disability is presented below.

Diagnostic checklist of writing disability

If you can answer ‘yes’ to 10 or 11 of these questions the children should be assessed for a writing disability (Silverman, 2003, pp. 540-541).

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.  Is their writing posture awkward?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.  Do they hold their pencil strangely?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.  Can you see the tension run through their hand, arm or furrowed brow?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.  Does it take them much longer to write than anyone else their age?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.  Do they fatigue easily and want to quit?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.  Do they space their letters on the paper in an unusual way (too close, too far apart, no spaces between words)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.  Do they form their letters oddly (eg, starting letters at the top where others would start at the bottom)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.  Do they mix upper- and lower-case letters?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.  Do they mix cursive and manuscript letters?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Are their cursive letters disconnected?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Do they prefer manuscript to cursive?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Does their lettering lack fluidity?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Do they still reverse letters after age seven?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Is their handwriting illegible?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
15. Are they very poor spellers?  
16. Do they avoid writing words they can’t spell?  
17. Do they leave off the endings of words?  
18. Do they confuse singular and plural?  
19. Do they mix up small words, like ‘the’ and ‘they’?  
20. Do they leave out soft sounds, like the ‘d’ in gardener?  
21. Is their grasp of phonics weak?

(Silverman, 2003, pp. 540-541).

**Strategies for helping the GLD student**

Silverman (2003, pp. 541-542) has recommended a number of strategies for assisting the GLD child. Three general principles underpin the suggested strategies.

- The first, and most important principle, is to identify the learning disability as soon as possible. This should be done before the age of nine if remediation strategies are to achieve maximum success.
- The second principle is that you should always teach to the child’s strengths.
- The third principle is that compensation strategies should be actively sought, whatever the disability.

**Strategies include:**

- Individual education programs (IEPs) need to be developed (see Extension Module 6 for details of this process). The programs should enhance the student’s strengths as well as make adaptations for his or her weaknesses.
- Timed tests or tasks should be avoided where possible, as GLD children usually have compromised processing speeds.
- Allowing students with writing disabilities to use a computer for written tasks will be a great help. In severe cases a voice-activated computer may be necessary. Generally, technological aids should be used wherever possible.
- Many GLD children think in pictures. Hands-on learning and visual presentations are vital to their learning.
- Part of being a visual learner is that they are whole-part learners rather than sequential learners. Therefore, it is important that correct answers be accepted even if the steps cannot be demonstrated.

- Help the student learn visualisation skills.

- Written assignments should be minimised. Oral exams and reporting are useful substitutes.

- Don’t lower marks due to mechanical problems such as spelling or sentence structure.

- Acceleration may be a useful option for GLD children if they handle complex tasks easily. The ‘simple’ tasks may defeat them but they may thrive on the more complex learning that acceleration can provide.

  (If considering the acceleration option reread thoroughly the recommended guidelines and practices for acceleration in Core and Extension Modules 6.)

Underachievement and low academic self-efficacy

The chicken or the egg?

Low academic self-efficacy can act as either a **primary** or a **secondary** source of underachievement. That is, low academic self-efficacy can lead directly to academic underachievement (act as a primary source) or it may develop as the result of specific experiences or conditions (act as a secondary source).

This point is illustrated by the following case studies, of Liam and Kate.

**Liam**

Liam is a gifted learning disabled child. He comes from a background where books abound and education is valued. His mother and father are both teachers. Liam experienced extreme difficulties developing his literacy skills and rapidly fell behind at school. He experienced little success despite his best efforts and now exhibits signs of low academic self-efficacy, almost certainly triggered by a lack of mastery experiences, due to his learning disability. In Liam’s case, low academic self-efficacy is a secondary source of underachievement as it developed as a result of poor mastery from another source. However, the low academic self-efficacy has now become a specific source of underachievement as well.

**Kate**

Kate comes from a home where books are rare and education is little valued. She rarely encounters positive academic role models in her daily life. Kate began her schooling eagerly but quickly realised that she did not know as much as the others. Disengagement began before the end of Kindergarten/Reception. Kate actually began her school life with low academic self-efficacy due to a lack of pre-school mastery experiences and positive academic vicarious experiences. However, Kate was identified as an academically gifted child when eight years old. In Kate’s case, low academic self-efficacy was a primary source of underachievement.
An important point to note here is that children from all backgrounds can develop low academic self-efficacy. Once established, low academic self-efficacy will result in poor task engagement, lessened persistence and low resilience with respect to academic tasks. Low academic self-efficacy can be a powerful, self-reinforcing talent mask that will inhibit academic achievement.

Whenever children are the subject of influences that lead to academic underachievement, one of the likely casualties is their self-belief (self-efficacy) that they can achieve academically (as we discussed in Core and Extension Modules 4). Consequently, a very good starting point in attempts to reverse underachievement is often the adoption of strategies that target self-efficacy enhancement. The specific causes of underachievement will need to be specifically dealt with as well, but self-efficacy is a fine starting point. The three major contributors to self-efficacy — that is, mastery experiences, vicarious experience and verbal persuasion (Bandura, 2003) — should be the target.
Strategies for enhancing academic self-efficacy in underachievers

Enhancing academic self-efficacy through mastery experiences
A cognitively engaged gifted child is on the way to reaching his or her academic potential. The hoped for outcomes in enhancing low academic self-efficacy are the development of engagement, persistence, resilience and the intrinsic motivation that accompanies self-belief.
A student who won’t engage in an academic task, or who engages reluctantly and with little persistence, is doing so for a reason.

Consequently, a concerted effort by the teacher to reverse the situation will be necessary. You will have to be patient, persistent and not give up. That is, your self-efficacy as a teacher will be tested!

The tasks
Selecting suitable tasks that are designed to provide constant success is essential. These tasks should:

- begin at a difficulty level considerably below the expected performance level of the child.
- be graded so that the degree of difficulty increases slowly.
- ensure that the child achieves success at every task.
- be visual for those who are strong visual-spatial learners.
- if possible, be perceived as ‘fun’ by the child. (Chaffey, 2002)

Ensuring mastery
To ensure that the child is successful with the mastery tasks a number of strategies are required:

- Carefully explain what is required in the task so that the child does not see ‘demons’ that don’t exist.
- If the child needs support to reach a solution provide just enough scaffolding to ensure success.

Avoid directly giving solutions — the child needs to provide the cognition. Scaffolding requires the teacher to provide direction and links, to allow the child to move from what she knows to new understandings.
• **Slow the child down.** A child rushing to finish (acting impulsively) is highly unlikely to engage effectively in the cognitive process.

• Provide **performance and attributional feedback, a major source of verbal persuasion**, following successful mastery experiences (Bandura, 2003).

  **Performance feedback** involves explaining to the students that their success was due to the process followed. This type of feedback should contain a careful reiteration of the steps that led to the success.

  **Attributional feedback** is designed to ensure that the students understand that their achievements were the result of their effort and ability.

• Closely linked to feedback is the provision of **appropriate praise**. Brophy (1981) suggests a number of strategies for enhancing praise, eg:
  
  — The accomplishment is specifically identified.
  
  — Information is conveyed to the student regarding the particular student competence that led to success.
  
  — Praise is delivered only when it is deserved and has a clear focus.

  Unearned praise is quickly recognised by the gifted child and may result in a negative effect on his engagement due to loss of trust.

• Following a successful mastery experience allow the child to explain to you (verbalise) how she reached the solution. This approach also supports the development of self-efficacy through the self-confirmation that the student really understood the process (Carlson & Wiedl, 1979). Teacher confirmation should follow the child’s verbalisation.

  As Piaget (Source unknown) noted ‘Children will only verbalise what they can deal with conceptually.’

**The learning environment**

It is essential to **keep the whole process as stress free as possible**. This may mean establishing or deepening trust, removing the fear of failure and the fear of doing too well (recall from Core Module 4 and Core Module 1 the forced-choice dilemma and the effect of stress generally). These socio-emotional issues may act as barriers to the mastery process.
Enhancing academic self-efficacy through vicarious experiences

‘Efficacy appraisals are partly influenced by vicarious experiences mediated by modelled attainments. So modelling serves as another effective tool for promoting a sense of personal [self] efficacy’ (Bandura, 2003, p. 86)

The effect of modelled experience on self-efficacy is well documented. By observing other people succeed, individuals may feel success is more possible for them and increases in efficacy expectation may result. Bandura (2003) found that while vicarious experience is an important source of self-efficacy it is not as powerful as mastery.

Strategies for facilitating vicarious experiences

Providing the student with appropriate adult and peer role models is your goal. If you wish to influence the student’s academic self-efficacy then the role model must be successful in the academic domain. However, there is a need to provide a broad match between the role model and the child. For example:

Lawrence, aged 14 and of middle eastern origin, is an exceptional soccer player and is academically gifted. However, he also displays signs of very low academic self-efficacy.

Lawrence’s teacher has decided to link him to a role model in the hope that the vicarious experience will enhance his academic self-efficacy. Lawrence’s teacher has chosen as role model a male of the same cultural background, academically successful and an architect by profession. This man also plays first division soccer.

Lawrence’s teacher felt that the vicarious experience may be far more successful on the academic level if Lawrence can first relate to the role model culturally and in the sporting domain.
The teacher as a source of vicarious experience

Teachers are a potentially powerful source of vicarious experience for students. They are natural role models for their class members and when students perceive that the teacher values and respects them, in the academic sense, academic self-efficacy growth is likely. However, the teachers’ power as a source of vicarious experience very much depends on how each individual student relates to the them. Bandura (2003, p. 87) comments:

‘The greater the assumed similarity, the more persuasive are the model's successes and failures. If people see the models as very different from themselves, their beliefs of personal efficacy [self-efficacy] are not much influenced by the model's behaviour and the results it produces.’

Teachers’ ability to influence the academic self-belief of their students is further highlighted by the effect of appropriate feedback. Bandura (2003, p. 101) notes:

‘It is easier to sustain a sense of efficacy [self-belief], especially when struggling with difficulties, if significant others express faith in one’s capabilities than if they convey doubts.’

The message is clear. Teachers must become trusted, accepted ‘significant others’ if they are to be successful vicarious experience sources for students. This is especially so for children from culturally diverse and/or low SES backgrounds.

Peer role models

Providing links with academically successful peers with whom the child can relate is another useful strategy. This form of vicarious experience has great potential, as peer pressure, in a negative sense, is often a major problem for the gifted child. This may be particularly strong for children from backgrounds where education is not highly valued or educational experiences have historically been largely negative.
Assisting Aboriginal children to overcome involuntary minority status issues

Indigenous Australian children experience greater levels of academic underachievement than their mainstream peers. It is reasonable to assume that this is the result of the lingering effect of long-term educational disadvantage, as revealed in Extension Module 4 where involuntary minority status issues were discussed. To overcome this uniquely Aboriginal issue, strategies are needed that focus on problems related to involuntary minority status (Ogbu, 1994).

Strategies for enhancing inclusion of the Indigenous community in the school

The source of the oppositional attitudes and mistrust of education that exists in many Indigenous communities is the long-term educational disadvantage experienced by members of these communities. In theory, these barriers have been lowered. However, the impact of long-term disadvantage is still carried in the form of secondary cultural traits that continue to propagate a mistrust in, and general oppositional attitude towards, education. These barriers are not easily shifted.

The answer lies in providing a school environment that is genuinely inclusive of the Aboriginal community.

The inclusion needs to be deep and genuine or the result may well be a deepening of mistrust by the Indigenous community.

Key strategies to enhance inclusion and trust in the school system

- **The necessary first step** is to contact the local Indigenous community and invite the elders and other senior community members to discuss your intentions and to create a joint plan.

- It is important for **teachers to understand Indigenous issues**, including the history of involuntary minority status and its effect on educational outcomes. Teachers need to hold expectations that, with the right guidance and opportunities, Indigenous students will achieve academically at similar levels to those of the wider community. A strong understanding of, and partnership with, the Indigenous community will make this much more likely.

As reported in Part 1, research using Coolabah Dynamic Assessment (Chaffey, 2002) has demonstrated the extent to which Indigenous children are underachieving academically. Further, this research identified gifted Indigenous children in the same proportion as in the wider community.
Strategies for defusing the forced-choice dilemma

The oppositional attitudes toward education generated by long-term educational disadvantage have meant that gifted Indigenous children are often in the grip of a powerful forced-choice dilemma. Doing well academically may mean losing favour in their community, especially among their age peers, an outcome that few Indigenous children would choose (Sharon Cooke, Personal communication, 2004). Strategies for weakening the forced-choice dilemma which gifted Indigenous children too often experience, must come from attacking the source.

- What you must not do is to try to remove or alienate the students from their community or peers. The likely outcome would be a worsening of the situation.

- The long-term answer is to work on community trust and real inclusion in the educational process (as discussed above). This will gradually increase the Indigenous community’s acceptance of your school and decrease oppositional attitudes. The forced-choice dilemma will equivalently weaken.

- If a powerful forced-choice dilemma exists, short-term answers are necessary so that gifted students can meaningfully participate, despite pressures not to stand out academically. Solving this problem is not simple, as it is deeply ingrained. Some positive strategies are:
  - Do not make the child stand out if he does well academically. Keep praise and recognition on a more personal level.
  - Work hard to establish trust.
  - Let the child know that you believe she has lots of ability and that you are prepared to help her.
  - Be patient. Little will be gained until trust is established.

Billy, a 13-year-old Aboriginal boy, was described by his Principal, Mr Long, as the ‘academically brightest child’ he had ever encountered. With the best intentions, Mr Long actively began to praise Billy publicly for his academic abilities and to ensure that every outstanding piece of work was recognised with awards at assembly. Mr Long noticed that soon after receiving these rewards, Billy was in trouble or absent from school.

What was happening?

Billy was the victim of a powerful forced-choice dilemma. Every academic award was followed by teasing and bullying by his peers. Mr Long believes Billy regained favour with his mates by displaying oppositional behaviours towards school.
Developing academic self-efficacy

For many gifted Indigenous students low academic self-efficacy is a major talent mask and inhibits academic development (Chaffey, 2002, 2004; Lovaglia, Lucas, Houser, Thye, & Markovsky, 1998).

Consequently, employing strategies to enhance academic self-efficacy is a necessary step to enable many Indigenous children to reach their academic potential.

In Core and Extension Modules 4, and earlier in this Specialisation Module, the issue of academic self-efficacy was discussed, do’s and don’ts reviewed and strategies presented. The appropriate sections of the above Modules should now be reviewed in order to develop a pathway to enhance the academic self-efficacy of your Indigenous children. You will be delighted and, at times, surprised by the outcomes.
1. **Coolabah Dynamic Assessment**
   - Briefly outline the key components of the Coolabah Dynamic Assessment method.
   - What are the advantages of the CDA over other identification methods for gifted ‘invisible’ underachievers?

2. **Action plan for working with GLD students**
   Since 10-15% of gifted students may have some form of learning disability a plan to cater for these students in your class is desirable. Outline a classroom plan to help acknowledge, and address the needs of, GLD students.

3. **Action plan for enhancing academic self-efficacy**
   Outline a plan to address low academic self-efficacy in your classroom.

1. **Coolabah Dynamic Assessment**
   - Briefly outline the key components of the Coolabah Dynamic Assessment method.
   - What are the advantages of the CDA over other identification methods for gifted ‘invisible’ underachievers?

2. **Action plan for working with GLD students**
   Since 10-15% of gifted students may have some form of learning disability a plan to cater for these students in your school is desirable. Outline a whole-school plan to help acknowledge, and address the needs of, GLD students.

3. **Action plan for enhancing academic self-efficacy across the school**
   Outline a whole-school plan to ensure that low academic self-efficacy is not a problem in your school.
References and Further Reading


Websites

Gifted Learning Disabled Children and acceleration at: http://www.nationdeceived.org/
Bandura and self-efficacy at: http://www.emory.edu/EDUCATION/mfp/self-efficacy.html