

ADDRESSING THE NEEDS OF THE GIFTED IN RURAL AREAS: THE ARMIDALE CATHOLIC SCHOOLS OFFICE PROJECT

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Abstract

A rationale for making special provision for the gifted in rural areas is discussed briefly and the issue of the incidence of giftedness among disadvantaged populations examined. A DEET funded project coordinated by the Armidale Catholic Schools Office is outlined as one way of meeting the needs of the gifted student disadvantaged by rural isolation. Samples of enrichment material produced as part of this project are cited and other outcomes of the project are discussed.

Disadvantage and Giftedness

It is widely accepted that gifted and talented children are found in all social and cultural groups and the New South Wales policy statement on gifted education includes reference to this fact. It is much less often asserted that talent will be found in anything like the same proportion in disadvantaged groups as in those that are more materially advantaged (though, see: Juntune, 1981, p.7; Passow, Monks & Heller, 1993, p.898) and very rare indeed for evidence of this to be presented. Therefore, it was salutary to unearth the finding that follows, though also sobering to have confirmed the fear that without special attention the 'working-class' gifted child runs a high risk of not turning his/her potential into academic success.

A wide-ranging French study (INED) which examined the intellectual level of children showed that 50% of gifted children (IQ of 125+) came from modest backgrounds (working-class parents). This subgroup of children with a more modest socio-economic background suffered a 50% failure rate in their secondary school studies despite their intellectual abilities. This does not compare favourably with the 90% success rate found among children from a better socio-cultural background (Terrassier, 1992, p.213).

Mindful of the sustained depressed rural situation in Australia there is a need to acknowledge that Australia's gifted rural children are significantly disadvantaged. This paper attempts to address some of the positive efforts of the Armidale Catholic Schools Office (CSO), in cooperation with members of the University of New England, to reduce this disadvantage by providing resources for both parents and teachers in rural Australia. It is envisaged that these provisions will enable students' learning to be facilitated in regular classrooms.

Research reveals evidence of the value of early intervention and of what is achievable through good teaching in the finding that

Success or failure in early elementary school is a better predictor of school success than socioeconomic status, according to a recent report.

Elementary Students At-Risk: A Status Report, was compiled by the Center for Research on Effective Schooling for Disadvantaged Students at Johns Hopkins University (News briefs, 1994, p.7).

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By making available significant funding to help the disadvantaged gifted the Hon. Ross Free MP, Minister for Schools, Vocational Education and Training, has highlighted this sub-area of the general field of gifted education while largely leaving it to those using the funds to define the nature and needs of this special population. This Commonwealth Government initiative has generated a number of projects of national significance, one of those initial projects for 1993-4 focussing upon the provision of opportunities for students in New South Wales in Years 3-10.

Purpose of the Armidale Catholic Schools Office Project 1993-1994

This project, funded through the Commonwealth Government's National Equity Program, sought to address the problem of providing suitably challenging enrichment material for gifted and talented students in geographically isolated areas. All too often such children, no matter where they live, have been catered for with 'more difficult' work examples compared with that used with their peers. As many teachers in isolated rural schools are relatively new to the profession (cf. Delforce, in Braggett, 1986, p.138), their first priority is generally concerned with catering for the needs of the class majority.

On the other hand, some teachers, aware of the need to cater effectively for all students, are looking for outside help to supplement their existing programs with enrichment activities, given their limited expertise at this stage to generate their own school based materials.

Three critical elements were chosen for immediate attention:

1. identification of such children;
2. experimentation with various modes of delivery of opportunities for such children; and
3. education and support of parents and teachers.

This paper focuses mainly on the second of these, though all three are interlinked and in the longer term a rethink of the overall program provided by schools will be sought, to provide a coherent, integrated program rather than talent development being seen as an 'add on'.

Rural Disadvantage

When discussing rural disadvantage it is often deemed necessary to consider what is meant by the term 'rural'. In the USA the National Rural Development Institute defined a rural area as one with fewer than 150 inhabitants per square mile or located in a county where 60% or more of the population lives in communities of 5000 people or less (Pendarvis, Howley & Howley, 1990, p.313). However, the planning group for the Armidale CSO project did not feel the need for a strict definition of 'rural', given our emphasis on relative isolation and our awareness of the range of geographical, socio-economic and cultural differences to be found within non-metropolitan NSW. Furthermore, many of the problems faced by talented students in rural areas are shared by similarly talented peers in cities. After reviewing the literature Shore, Cornell, Robinson and Ward (1991) conclude that "a strong case for rural gifted education's being substantially different in principle from any other is not sustained" (p.254).

Nevertheless, there are some factors that seem to be related to geographic and social isolation, such as:

- Some rural families may be ambivalent in their attitude toward education, perhaps seeing it as a challenge to their existing values and beliefs (Pendarvis et al., 1990, p.316).

- Gender stereotypes may be more likely to influence expectations about subject and career choices (Pendarvis et al., 1990, p.316).
- Identification of some students as gifted may be seen as divisive, especially if an egalitarian ethic is strong. Shore et al. (1991, p.255) note Pitts's suggestion of "using a blind identification process to encourage objectivity and prevent favouritism in small, closely knit communities."
- Where distances between schools, or between home-schooled students, are great there may be fewer opportunities for talented students to come together for centralised programs (Pendarvis et al., 1990, p.319).
- Small rural schools may not have sufficient talented students, or sufficient in particular areas of talent, to justify having special programs for them (Pendarvis et al., 1990, p.319). The number and expertise of teachers will influence the shape of the curriculum. While awareness among Australian teachers is increasing, we still find examples of limited expertise among distance education teachers (e.g., Delaney, 1994).
- There is a relative lack of resources for information, such as libraries and industry.
- A lack of support personnel exists, including counsellors (Elliott, in Braggett, 1986, p.139), to help cater for the needs of gifted and talented students.

On the other hand, we recognised that rural isolation has its positive aspects, too, some of which Elliott noted:

isolated children need to be independent, flexible, and may proceed at their own rate. Their parents frequently have high dedication and are interested to assist (Braggett, 1986, p.139).

For the purposes of this paper the rural area that constitutes the Diocese of Armidale was the main focus. Within this diocese there is only one town with a population above 30,000 and two others above 10,000. Most towns in the diocese would have populations ranging from 1,000 to 5,000. Within such communities, schooling will be different from that provided in larger cities on some of the above dimensions, at least. Approximately, half of the twenty seven Catholic system schools have less than one hundred students enrolled, with some schools being located three, four and five hundred kilometres from the Armidale CSO. In 1994, twelve schools were classified disadvantaged and over 5,500 students received an education from kindergarten to Year 12. The efforts in the Armidale Diocese have direct implications for the Diocese of Wilcannia Forbes and numerous rural dioceses throughout Australia.

Procedure for the Development of Modules

One of the major aims of the production of modules for students in rural areas was that, as much as possible, the packages should contain the information necessary for students to complete activities without the need for additional information resources which might not be easily obtained. It was decided to link the modules with particular 'bands' as indicators of where they might be used. Since the 'age' range of the project was Years 3 to 10 of school, the bands were suggested as Years 3/4, Years 5/6, Years 7/8 and Years 9/10. However, some authors chose a wider target band, such as Years 7-10 (e.g., the module on "Performance: Innovation" which deals with the history of performance, inspirational pieces, devising a concept and then selecting an area to expand sound, light, scenography and costume) or Years 4-6 ("Let's Have a Party" where students confront the numerous questions associated with organising a social event, from

creating a party theme to decorations, entertainment, meal, presents and dress). Obviously, the final 'match' will depend upon the talents and interests of individual students.

For the development of the modules, the need was recognised to provide guidelines that were neither so prescriptive as to inhibit the initiative and creativity of the prospective authors, nor so unclear that the materials might lack sufficient detail and challenge for highly able students. While the people approached to submit proposals were known to have special expertise in a particular field, their previous exposure to the literature on the education of gifted and talented varied considerably, from very little through to people lecturing in the field at tertiary level.

Our first consideration was whether we could, or should, provide a 'model unit' for the authors, either in outline form or fully developed. Our conclusion was that it was inappropriate for us to produce one, given the spread of subject matter envisaged. As well there was a recognition that diversity of approach was desirable, anyway, to allow more scope for student differences in preferred learning style. Nevertheless, one sample of an existing format was provided as it embodied such principles as open-endedness, a problem solving focus, a requirement for higher levels of thinking and the use of primary source material, though it was made clear that this was only one possible form of organisation and that it was in no way a recommended, let alone required model. Of the modules completed so far, the one on "The Thylacine" most closely resembles our sample format whereas others have chosen to apply the underlying principles in their own creative ways, thus providing the variety we had hoped for.

At its second meeting the committee members decided to base its advice to authors on Maker's (1982) proposed, and now widely followed, 'four modifications' for differentiating the curriculum for talented students - namely, content modifications, process modifications, product modifications and modifications to the learning environment. Since a problem solving approach was envisaged, ideas from Renzulli and Reis (1985) on the necessary steps to take when attempting a Type III 'investigation' were also incorporated into what became a set of recommended 'guiding principles'. In their final form these were presented as follows:

Enrichment Units: Some Principles to Follow

- Choose a topic / theme that is not already covered in the core curriculum.
- Where possible, base the unit on an enrichment model, or on a combination of these, and state this in the introduction.
- Consider, and incorporate where possible, Maker's suggested curriculum modifications.
- Allow for a variety of differences in preferred learning style (e.g., different ways of acquiring information and of expressing ideas).
- Encourage integration of knowledge from different sources and disciplines.
- Focus on open-ended tasks, where a number of good answers may be possible, and allow some student choice of activities.
- Build in the development of self-directed learning, including self evaluation (and opportunities for peer-evaluation, when possible).
- Cover all levels of Bloom's Taxonomy in the activities set (i.e., knowledge/comprehension, application, analysis, synthesis and evaluation), but ensure that most tasks are aimed at the top three levels.

- Include explicit skill development components, so that students are helped to acquire prerequisite skills needed for later tasks.
- Encourage metacognitive awareness - i.e., ask the students to reflect upon their thinking, including their choice of strategies for gathering information, solving problems and expressing their findings and ideas.
- Encourage the students to add further activities or investigations of their own devising (the inclusion of a planning web may facilitate this).
- Ensure that the tasks require the students to transform the information they acquire and to produce 'new' ideas, rather than merely repeating others' ideas.
- Include some tasks that require the students to examine attitudes, values and social responsibility.
- Allow for at least one task to be explored in depth.
- Include a requirement that the students plan a timeline and/or contract for the tasks to be attempted.
- Encourage the use of community expertise, both local and beyond.
- Include some interest-building resource material with the package (for some students will have limited access to library facilities).
- All material in the package must be free from copyright elsewhere or have the copyright holder's written permission to reproduce it (with this duly acknowledged).

Recognising that these might not be self explanatory for those authors less well acquainted with the gifted and talented education literature, prospective, participants in the project were also invited to ring the research team for further clarification if they felt the need. In fact, there was little need for further discussion, perhaps demonstrating that the cross section of authors was well chosen.

A two-stage monitoring process was set up to enhance quality control. Authors of the enrichment modules were first asked to submit a concise outline of the scope and sequence of their proposal, but in sufficient detail to allow the committee to decide how well it matched its set of principles. If a preliminary plan was deemed to be acceptable the author was invited to proceed with the production of the module. In some cases, probably about half, the plan was returned with suggestions from the committee on how it might better meet our expectations. In a small number of instances there were further minor amendments suggested upon receipt of the 'final' (or, more accurately, penultimate) draft. The next step was a field trial of the modules in selected schools in Western Australia and Queensland as well as in New South Wales, with scope for additional changes where the responses of students and teachers (or parents) indicated the need.

Evaluation of the modules included:

1. Asking a selection of teachers and parents to examine them and provide feedback on the usefulness or otherwise of the materials. Interest specifically focused on whether the material was appropriate and challenging for the students, whether its expectations for students were clearly explained and how well it was integrated with existing curricula.

2. Having a number of students in various rural centres work their way through different modules and provide feedback as to the suitability or otherwise of the materials. This involved an evaluation of interest level, content and form of presentation of the modules.

It is expected that there will be on-going evaluation and expansion of the modules as teachers and parents gain confidence in their work with gifted and talented students and move on to creating their own materials or units of work, perhaps more specifically attuned to local conditions and individual needs. The modules from the Armidale CSO project are intended to provide only one sort of model to help in this process.

A target of 32 modules was set and to date twenty eight of these have been completed or have reached the final planning stage. Those completed vary in length from 25 to 68 pages, an indication of the extensive source material included in most cases. A full list of modules is outlined in Appendix A.

Specific Examples from the Modules

The modules created for this project may be used as a resource for gifted and talented students in the regular classroom or for use by students whose geographic isolation means that they do most of their learning from home. It is anticipated that these resources will foster the talents of individual students and go some way toward meeting their need for challenging and stimulating enrichment. Some of the components of the modules include:

- higher order thinking skills where students work on open-ended problems; e.g., (a) the analysis tasks on p.7 and (b) the evaluation task on p.15 of Joan Sexton's "Language and Literacy" module:
 - (a) Dreams and unreality play a part in the lives of each group of characters. Discuss how these dreams affect the lives of Mrs Weston and Nobby. [re Nadia Wheatley's *The House That Was Eureka*]
 - (b) To what extent does the play present a true picture of the difficulties experienced by migrants in the 1960s? How do Christmas rituals reflect the relationships in each family? [re Michael Gow's *Away*].
- an attempt to cater for individual differences with a wide range of activities and resources (e.g., the contracts in the module "A Pets' Picnic").
- modules which are developmental in nature so as to include the development of necessary basic skills to master some activities (e.g., the "Photography Ideas, Explanations and Techniques" module and the "Chemistry: The Heart of the Matter ... and the Environment" module).
- the encouragement of student creativity, as in the module on "Enamelling" and Tasks #4, #7 and #15 in "A Pets' Picnic"; e.g.,

Task 7

On the computer, design personalised invitations for the pets that you will be having at your picnic. Remember the rules that have been set. Don't forget to include an RSVP date to help you with your planning.

- the promotion of self-evaluation so as to encourage students to be actively involved in their own learning. (A separate booklet to accompany the teacher inservice component of the project will provide examples of how this may be approached.)
- integration of knowledge from different sources and disciplines (e.g., "Mozart was a Scientist" and the module on "Photography").

Mentors

Another hoped-for outcome from the production of the modules is the possibility of mentor-led networks being created for students sharing similar interests. We are hopeful that collaborative relationships will be established where students can pursue their interests to greater depths. These may allow students to establish, by distance communications means, a mentor relationship with 'experts' in the field and so continue their enthusiasm for a particular subject area or specialisation (e.g., ceramics or cartooning).

If further networks of mentors can be established as a result of the Armidale CSO project, these may provide another means of empowering talented rural students to take some responsibility for, and feel some control, over their own present and future learning. This in turn should encourage the development of an internal locus of control in the disadvantaged students involved, a goal commonly stated or implied by writers in this field (Wallace & Adams, 1993, Knight, 1993; Knight, in press). An additional way of seeking to achieve these outcomes may be to facilitate the creation of enrichment material by students themselves, for use by other talented students in relatively isolated rural areas, a form of peer or cross-age tutoring at a distance.

Evaluation and Further Developments

Project 1993-1994

Evaluation of the whole project was recently undertaken by a panel of three specialists in the provision for gifted students. Members of the evaluation committee were Professor Eddie Braggett (Professor of Education, Charles Sturt University, Riverina) who chaired the committee, Sr Joan Sexton (Project Officer for Gifted and Talented Education, Good Samaritan Sisters), and Mr Roger Smee (Special Education Advisor - Gifted and Talented, Diocese of Lismore). Copies of the report have been forwarded to the Department of Education, Employment and Training.

Armidale Catholic Schools Office Project: 1994

As an extension of this project the Armidale Catholic Schools Office, in conjunction with three other dioceses, gained further National Equity Program funding for 1994, to focus upon the specific needs of rural disadvantaged gifted children in the first three years of formal schooling (Kindergarten, Year 1 and Year 2, in NSW). The one year program addressed the question of identifying and accommodating the needs of young gifted and talented children (K-2) who are disadvantaged by low socio-economic background, isolation, poor English proficiency, or by disability. It was a logical progression of the initial project. Three elements drove the endeavour: (i) development of learning materials, (ii) professional development of teachers and parents and (iii) establishment of formal and informal networks of support for children, parents and teachers.

It is hoped that materials for general sharing will emerge from this second project, too, but in different formats and produced mainly by practising class teachers at the infants level.

Armidale Catholic Schools Office Project: 1995-1996

As a result of the achievements of teachers of the Armidale Diocese and participating senior staff within the Education Faculty of the University of New England, funding has now been provided for an unprecedented third project. Titled: "Parents as Lifelong Teachers" it is a two year program to support parents of isolated disadvantaged gifted children. It is based upon the efforts of the Armidale CSO during 1993-94 to better inform parents, the first and foremost teachers of their children, of the special support and encouragement they might provide. Through an acknowledgment of the inherent responsibility and expectations of parents, the project affords a unique means of trying to ensure the sustainability of earlier efforts through a multimedia program for parents.

Centre for Australian Rural Gifted Children

Discussions are underway concerning the possibility of establishing a centre, based in Armidale, that will provide leadership in addressing the needs of Australia's gifted rural children. It is anticipated this ambitious endeavour will draw upon the expertise of several individuals and organisations, especially participants in the projects described above.

Conclusion

One of the more evident outcomes of the Armidale CSO's projects is the production and distribution to all disadvantaged schools throughout Australia of a modest book titled: *Developing Children's Talents: Guidelines for Schools*. The book is intended to contribute to a better understanding of how to identify gifted children and what to do with them in the classroom. In addition, discussions with a publisher are continuing with a view to arranging commercially publication of the Enrichment Modules. The individuals responsible for the effective implementation of these projects are cognisant of the further challenges before them. However, they are only extending the work of many teachers and parents in rural areas who, for years, have dedicated themselves to the provision and improvement of education in rural Australia. The ultimate test for the Armidale CSO projects will be how well they can serve the needs and engage the support of the rural community at large.

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Appendix A

ANNOTATED LIST OF MODULES

GRADES 3 & 4

So You Think I'm an Alien ... Do You?

The unit begins with students having to research and discover aspects of the galaxy in which this earth and they are situated. They are then asked to create a series of art works in a variety of different ways and with different mediums. When they have completed these works they write poetry, stories or a play, using the works that they have created.

The Hobbit

The unit contains activities designed to cater for the diverse needs of a composite class, through extending their thinking skills in various curriculum areas. At the completion of the novel, each child works through a contract.

Let's Go Exploring

Children cover activities within the unit ranging from time travelling, exploring ancient Australia, exploring inventions, exploring space and the future. The questions and activities are clearly arranged in the hierarchy of Bloom's Taxonomy.

GRADES 4 & 5

The Thylacine: Tassie Tiger - Fact or Fiction

Since the settlement of Australia by Europeans in 1788, 30 species of animals have become extinct and a further 57 species are considered endangered. The unit encourages the student to examine some of the arguments as to the existence or otherwise of the thylacine.

Designing the Layout of a Farm

The unit requires children to design a farm layout which is effective and conserves the soil. Participants need to fence the farm, build a homestead, conserve water, cultivate crops, raise cattle, maintain farm machinery etc. Successful farmers receive a Diploma of Farm Management.

Time Capsule

Students have the opportunity to develop ideas for art work through their experience of people, places and things in the culture around them.

GRADES 5 & 6

A Pet's Picnic

The unit begins by reading to the whole class the motivational poem "The Queensland Dog" by W. M. Scott. This is used to launch the activities for the child and gives the class a reference point for the activities that will result.

Homes and Houses

This is an investigation of homes: what they are like, how they are built, how they have changed, how they differ and how they are the same.

Time Fantasy

This is a literacy based unit in which the reader traces the experience of the main character from one time to another time frame. Children are encouraged to become aware of the elements in a Time Fantasy and to response in a variety of mediums to the novel.

Family History

This is about the lives of family members and their households. It looks at where they lived, what they did, how and when they did things.

Drama: Moods and Feelings

This module aims to identify talented children in drama and grant opportunities for acquisition of drama skills and personal extension of these skills in related art activities.

Ecology

This unit has been divided into four parts: composting and worms; landcare; endangered species and bush tucker.

Let's Have a Party

Participants confront the numerous questions associated with organising a social event, from creating a party theme to decorations, entertainment, meal, presents and dress. Each section encourages students to reflect upon the challenges and consider the implications of their actions.

Food

This is an activity based unit that requires the students to address several questions; a unit that includes a number of recipes, requires one to plan a party, a market day, report to the class, solve a dilemma, etc.

Cartooning

An illustrated unit to assist students to draw cartoons in ten simple stages: from warm up activities to simple drawing skills, exercises to sequential drawing. Students are provided with clear examples of what the artist is explaining. Upon completion participants are provided with questions to answer and activities to undertake.

YEARS 7 & 8

Water: An Integrated Unit

The aim is to allow a full understanding of the importance of water in our everyday lives, the properties of water and its place in nature.

History: The Way We Were, Leading To The People We Have Become

The units attempt to explore how Australians see themselves today in terms of the past experience of events, social aspects and the culture and entertainment of the past that have contributed towards making us the people we are today.

Lotions and Potions: The History and Science of Cosmetics

The aim is to look at the historical development of cosmetics, providing an understanding of the origins of some of our practices and position in cosmetics.

Creating New Art Works from Existing Art Works

To create a continuous line drawing into a lino print, into three new different art works and then into a sculpture.

Parents Behaving Badly

A unit of work exploring fictional fractured families, it explores the different perspectives of five authors and shows how each attempts to find a resolution within the fictional setting of the novel.

The Bible for Today's World

This unit is designed to provide material which is relevant to a range of students and to cater for those with a strong empathy and who show signs of high moral development. It aims to highlight the relevance of the Bible, to have students become familiar with some Bible stories, to explore the range of knowledge and literature offered by the Bible and to develop library research skills.

YEARS 7-10

Performance: Innovation

Participants read four sections dealing with history of performance, inspirational pieces, devising a concept and then selecting an area to expand - sound, lighting, scenography and costume.

Cycle for Life ... Recycle the Earth

The aim of the module is to look at the issue of recycling and provide an opportunity to analyse the problems confronted.

Fractal Mathematics

The module contains five sections: Koch snowflakes, towards infinity, feedback, chads, self-similarity.

Photography

The module is designed to allow participants to develop their own ideas about 'photography' and how it might be used for individual purposes.

YEARS 8-10

Creating Lives

Designed to encourage students to reflect upon their own creative potential, through an understanding of intelligence and factors that influence achievement. It uses the life stories of real Australian people to identify the social and emotional difficulties associated with being different and some ways to cope with these.

YEARS 9 & 10

Language and Literature Unit

It focuses on reading, writing, drawing and, if possible, performing as Joyce Van Tassel-Baska envisages literature as a catalyst for gifted students.

Beethoven Was a Scientist

The units helps the participant appreciate the presence of physics within music.