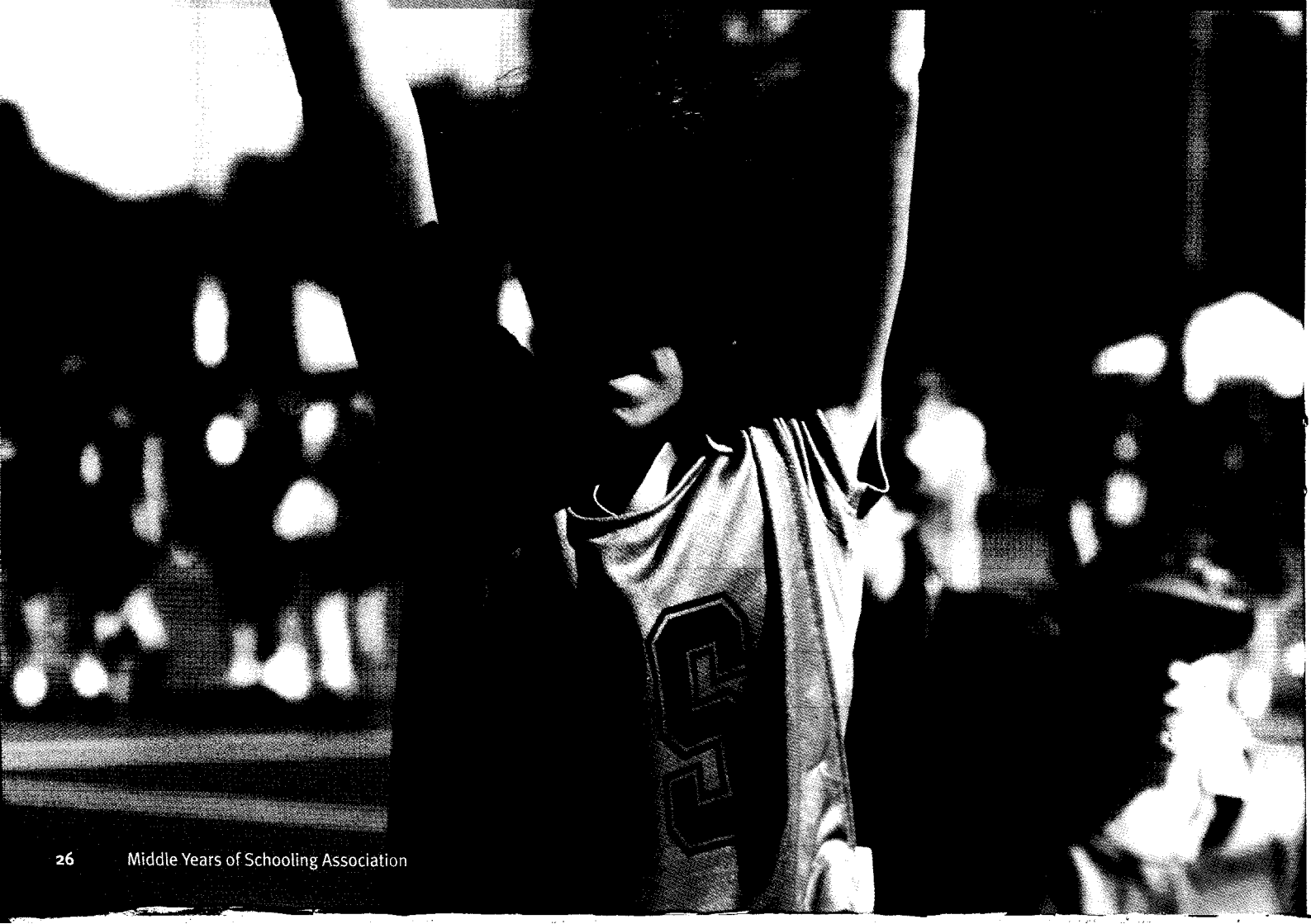
Teaching a middle years, multi-age, multi-school gifted program: Reflections from a teacher's perspective



Abstract

Gifted education is on the agenda in Australian education. While much has been written about catering for students with gifts and talents, little research exists about teachers establishing and providing quality gifted education programs for students with gifts and talents, particularly in the middle years. This article contributes to filling this void by researching a teacher's journey in creating a middle years, multi-age, multi-school gifted program based within a schooling alliance in Australia. Over the course of a year, as a teacher-researcher, the author kept a reflective diary to highlight issues that arose in the implementation of a middle years gifted program. Key themes emerged from the data, including providing a relevant learning approach, suitable student identification in the middle years, and beliefs about the future of the program. This article provides insights for teachers and schools, suggesting that it is possible to set up a middle years multi-age, multi-school program that caters for the needs of students with gifts and talents.

Introduction

> *I didn't really know where to start. These moments seem to come around occasionally in teaching where the outcome just seems impossible. Nevertheless, like a new explorer on a maiden discovery, I decided to set sail and see where I ended up. The principal asked me if I would create a suitable middle years, multi-age, multi-school gifted program for students with gifts and talents. With no experience, plans or maps to follow, I would have to create my own map. I thought about each of the words ... What is 'middle years'? What is a 'multi-age classroom'? What does 'multi-school' mean? What do they mean when they are placed together?* (Reflective Diary, December 2006)

The diary reflection describes the beginning of a teacher's involvement in developing a program for gifted and talented middle years students in Queensland, as part of a state schooling alliance between four primary schools and one high school. Previously, the five schools had decided to form an alliance to bring together combined resources, skills and experiences to provide quality educational learning experiences across all phases of learning. After being approached by the principal of her school, the teacher accepted the role of coordinator for the program. She was employed for one day a week, and her role was to design this program, with the theme of environmental sustainability for students in Years 5–9. Over the course of a year, the teacher kept a reflective diary of her experiences, allowing an insight into her perspective of the program. These reflections are presented as diary entry narratives and suggest instructional applications for creating a multi-age, multi-school, middle years program for gifted and talented students in the Australian context.

While much has been written about gifted and talented middle years students, less is known about setting up programs, especially within school alliances in a multi-age, multi-school classroom. This paper explores the teacher's experiences in achieving a problem-based learning approach for all students in this context. Its aim is to investigate how the teacher was able to create an extensive curriculum, responding to the call for enriched learning for students in the middle years in the allied schools. It also reflects on the progress of the program over a year.

Gifted education in Queensland

Gifted education in Australia is a growing field, emerging as a key focus in state educational policy. Gifted and talented students are defined as those who have outstanding abilities, are capable of high performance, and who require differentiated educational programs (beyond those normally provided by regular school programs) in order to realise their contribution to self and society (Marland 1982). In Queensland, gifted education has emerged as a key prerogative directed by the Gifted Framework (2004), with guidelines for students, teachers, parents and principals. The framework provides key identification strategies for selecting these students. It is hoped that explicit policy will result in improved quality of education for students with gifts and talents.

Identifying such students in classrooms can be difficult for teachers. When Gagne's (1993) model of development is applied, 15 per cent of students in every classroom are gifted. This suggests that up to 90 000 students in Queensland classrooms may be regarded as gifted. Given the relatively low numbers of students who are currently thus identified, a significant number of students with gifts and talents remain unidentified. This may lead to high numbers of gifted children underachieving at school (Gross 1993). Underachievement is defined as 'general academic achievement at a level significantly below that which is predicted by the student's intelligence quotient' (Gross 1993:225). According to Rimm (1995), students fall into underachieving patterns because of a combination of factors in their home, school and peer environments. This makes it challenging for teachers to identify gifted and talented students, as they must consider conditions outside the classroom which influence student performance.

In 2008, Education Queensland released an action plan for dealing with gifted and talented students, to be implemented over three years. It identified key strategies for ensuring that all teachers and schools meet all the requirements, and set timelines within which minimum requirements must be met. These strategies include

1. Identification Processes— to ensure that schools have rigorous and justifiable processes in place to nourish the talents of students with gifts and talents.
2. Collaboration/Partnerships— to ensure that parents/carers, teachers, principals, district leaders

and others work together to give students with gifts and talents the best opportunities to realise their potential for outstanding achievement.

3. Leadership— to ensure that district and school leaders facilitate collaborative processes for stakeholders and provide appropriate resources for teachers in their implementation of programs for students with gifts and talents.
4. Teachers' Knowledge, Development, and Skill— to ensure that teachers are familiar with characteristics of giftedness and are able to plan and apply appropriate programs to nourish the talents of students with gifts and talents.
5. Students— to ensure that students with gifts and talents pursue excellence in their learning.

The achievement of the five strategies was unclear to the schools in the alliance. Schools must make their own decisions about providing suitable gifted education for students using these requirements as overviews.

Background to the program

Context of the five schools coming together

Five schools in Brisbane took part in this learning initiative. They had previously been in a learning alliance as they had been grouped in the same educational cluster because of their proximity. Four primary schools and one high school individually selected 10 gifted and talented students in Years 5–9 as suitable participants. All students selected were interviewed individually (accompanied by their parents) and submitted a short portfolio of their work. After the interviews, a final group of 20 students was selected for the combined schools' middle years gifted program. It included three students in Year 9, two in Year 8, five in Year 7, five in Year 6, and five in Year 5. The students gifts and talents were in the areas of music, art, science, maths, computer technology and sport.

Students met once a week (all day Friday) in the resource centre of the local high school. Their week, therefore, consisted of four days in their generalist classroom, and one day a week with working with the other selected students and the researcher. Every week, the researcher would email individual student progress back to their classroom teacher and principal.

The first Friday class involved a tree-planting ceremony, to reduce the students' carbon emissions. Parents were invited to take part in the entire day to see what the program was about, and from then on often joined in Friday activities with the students. (The parents generally felt that they could become actively involved in their child's learning within the middle years program.)

The local community was heavily involved in environmental sustainability, with support available from the local council and businesses. Over the previous two years, various local community groups had formed to try to address issues of car usage, water pollution, general household waste, promotion of vegetable gardening and tree planting. These groups visited the class and shared their local environmental knowledge with the students.

The specific learning approach chosen for the middle years program

After an initial investigation of the literature, problem-based learning was selected as the approach for engaging the students. This approach engages them in authentic learning activities based on professional problems of practice as the starting point, stimulus, and focus for learning (Boud & Feletti 1991; Walton & Matthews 1989). In Barrows' model of problem-based learning, students learn within a particular domain with problems derived from on-the-job problems of practice (Barrows & Tamblyn 1980). This enables them to function and participate as members of a community of practice (Barab & Duffy 2000). Barrows and Kelson (1995) suggest that the advantages for students engaged in problem-based learning include development of the abilities to: construct an extensive and flexible knowledge base; develop effective problem-solving and self-directed, lifelong learning skills; become effective collaborators and intrinsically motivated to learn.

It is argued that problem-based learning may enable students to retain more knowledge and develop independent learning skills. Furthermore, collaborating on a problem can enable them to identify knowledge gaps and help guide their own study (Dunlap 2005). This is essential in gifted education. In the program under discussion, the teacher noted that students began to see gaps, not only in their own knowledge, but also in that of other students, teachers, and the community.

Discussion between students is an important element of a quality education. The teacher incorporated a strategy for students to engage in regular discussion on their research topics. This was largely achieved through a level of dialogue that allows assumptions of current cultures and subcultures to be discussed, creating discussions of links between knowledge and practice. Shein believes dialogue 'becomes a central element of any model of organisational transformation' (1994:40). Dialogue between students allows networking and recognition of similarities, differences and areas of interest, creating discovering, collectively, ideas that individually none of them might ever have thought of' (Shein 1994:44). Dialogue must, therefore, be considered an essential component of middle years student identity and professional learning.

Research methods

Reflecting on one's own teaching practices by continually analysing and examining one's beliefs, understandings and pedagogy creates the potential for professional growth. Many noted researchers agree that the process of 'research and inquiry can nurture reflective practice' (Yost & Sentner 2000:40). The teacher therefore decided to keep a reflective journal of experiences throughout the year. Notes made at the end of each week enabled her to track the transformation of her beliefs. This type of development is

described by Dewey (1938, cited in Rodgers 2002) as the desire or duty to actively search for truth and use information gained to make positive change. This can be achieved by reflection—speaking and writing about one's experiences, enabling one to rationalise one's choices.

The purpose of the diary was to document stories and experiences with students, teachers and parents during the year of the program. This technique has become increasingly widespread and accepted in teacher research (see for example: Alsup 2006; Ayers 2001; Connelly & Clandinin 1999). Lyons and LaBoskey define narrative practices as:

> *intentional, reflective human actions, socially and contextually situated, in which teachers with their students, other colleagues, or researchers, interrogate their teaching practices to construct the meaning and interpretation of some compelling or puzzling aspect of teaching and learning through the production of narratives that lead to understanding, changed practices, and new hypotheses.* (2002:21)

The teacher visited her reflective diary many times over the year, reliving the written experiences. Teacher narratives are a compelling way of engaging others to share and better understand their own experiences (Gomez & Tabachnick 1992), and can give teachers many opportunities for reflection and information gathering. Through the diary, the teacher was able to document her engagement with the students and the learning that was occurring in the class, and tracking the progress of the program.

At the end of the year, the teacher analysed the diary by looking for the key themes in the writing over the whole period. Three themes were evident—identification of students for the program; use of problem-based learning, and the future direction for the program. Each theme is now discussed in greater detail.

Findings of major themes

Theme 1: Identifying students for the environmental gifted program

The teacher's initial reflections were strongly focused on the selection of students for the program. She wanted to identify students who were not only gifted, but also had a general interest in environmental sustainability. She described the long hours she spent trying to develop a suitable identification strategy that would give every student a chance:

> *I would spend hours trying to work out the best way to identify middle years students. I didn't believe in some current techniques and realised that I would need to make quite a few stages to get the process right. I didn't want to miss the underachievers especially in the middle phase of learning.* (Reflective Journal, March, 2007)

Identifying gifted and talented middle years students can be difficult, especially if underachievement is common. Different techniques from those used previously were used to identify students for the environmental program, as past failures had occurred. To better understand students' abilities, different stages and stakeholders in their learning were examined. Initially, parents, teachers and students were asked to submit evidence about their capabilities and achievement. The students were then asked to submit a piece of work/performance (written, drawn, filmed or taped) that they had created themselves and were proud of. Parents and students were then involved in an interview process with a selection committee to identify key student characteristics. Questions they were asked related to a student's learning style, interests, and opinion of their capabilities. To demonstrate their problem-solving ability, they were also asked to share problems in the environment that they would like to solve:

> *One of the questions I would ask each middle years student was how they have recently helped the environment. I nearly fell off my chair when a little Year 5 boy told me he had created a freshwater conversion tank. He had created it himself after he read about it in one of his Dad's books. He was able to tell me about all the chemical conversions and equations that were needed. He used words that most adults wouldn't comprehend. I looked at his report card and he was achieving straight Cs. I talked to his Mum and she said he was often frustrated in class as the work was too easy. He simply didn't do it or only gave one word answers to the teacher. She had started to teach him after school so he didn't hate learning. Under normal testing methods, this kid would have fallen off the radar!* (Reflective Journal, April 2007)

However, the teacher also had problems with the identification process. While she generally felt that the community supported the setting up of the program, parent concern that it should be made available to all students in the five schools, not just the 20 selected, she began to question why environmental sustainability was not incorporated into more activities for all students at all schools:

> *I guess I started to question my own intentions when parents began to question why every middle years student in every school did not have access to this program. I didn't really know what to say. The best way I could explain it was talk about a teacher's individual control over their curriculum. I had chosen problem-based learning to cater for the middle years students. This is the learning environment that I have set up for the students in this program. Other teachers choose to set up learning environments differently. Each may work in their own way. But I did wonder like the parents, why weren't more students learning about environmental sustainability in their own classroom?* (Reflective Journal, May, 2007)

Results raised concerns about the political powers that shape traditional school models. The teacher had to persistently negotiate teachers' resistance to teaching environmental sustainability in a gifted program, and asking them to rethink what constitutes important learning was a difficult process based on continual

educational reform. While there is a lot of rhetoric about teaching environmental sustainability, there is also a lot of social opposition to teaching it.

Theme 2: Designing the program through problem-based learning

The second theme to emerge was use of learning approach based on problem solving. After discussions with the local community, the teacher was interested in creating an environmentally sustainable program that would eventually be self-funded. Though she did not initiate the project, she was happy to create, collaborate and refine the program with students, parents, other teachers and the community. She had always been an environmental activist and enjoyed the challenge. She reflected:

> *I liked the flexibility of what I could create in this middle years program. Initially, I did heaps of reading so I could find suitable plans that others had used but discovered an environmental gifted program isn't the norm. I really wanted this to work, but at the same time I really wanted the students with gifts and talents to be challenged in the program.* (August, 2007)

Creating a program that caters for the needs of all middle years students with gifts and talents can be difficult, as it needs to be flexibile enough to allow individual and group learning in a context that encourages problem solving. Problem-based learning therefore seemed the best method for enabling students to develop a greater understanding of the knowledge and skills surrounding environmental sustainability. It seemed to give them an opportunity to engage with many different types of learning in the classroom as they worked to solve problems.

Problem-based learning is not a new idea in education, but gives learning and teaching a different perspective from that in traditional classroom models. The teacher wanted the learning context to cater for the needs for all students, outside the traditional models of schooling, so that the students could develop an understanding of environmental sustainability. She realised that the whole program needed to resist the challenging dominant discourses of power, reflected in the current social shaping of the school:

> *I didn't want the students to be stuck in a traditional learning model of I am the expert and you are the novice. I wanted the students to become active problem solvers who were their own experts exclusive of the school's culture to consume. The overall problem created for the group was to try and make the schools and community more environmentally sustainable. I gave this as the overarching problem to students, before we worked out smaller sub-categories to work on. Students generally liked having a real-world problem to work on as the stimulus for their learning, shaped through the fostering of their own concern for the environment.* (Reflective Journal, February, 2007)

Problem-based learning engages students in authentic learning activities based on professional problems of practice as the starting point, stimulus, and focus for learning (Boud & Feletti 1991; Walton & Matthews 1989). Such knowledge development within gifted education is essential for student learning, allowing students to become independent learners. In the program under discussion, the teacher noted that students began to see gaps, not only in their own knowledge, but also in that of other students, teachers, and the community.

> *After initial implementation, middle years students seemed to develop an independence of control over their own learning. They realised they were part of a group that was going to make changes in their community by solving environmental problems that directly related to them. The students started to realise that it was not only about what things they didn't know about, but what the school and community didn't know about environmental sustainability. The students realised education and understanding was the key to finding solutions. Already they have created newsletters for the school and community, created a native garden (after securing free plants) to educate others of gardening and water conservation, and conducted audits of the schools to decrease electricity consumption.* (Reflective Diary, June, 2007)

When creating a suitable middle years program focussing on environmental sustainability for a gifted education program in a middle years, multi-age, middle schooling environment, a problem-based learning model appears to extend and challenge the beliefs and knowledge of all students. This program may therefore provide direction for future research into environmental programs for gifted education. Environmentalism can be viewed as a tool of transformation when used to create a curriculum that provides flexible learning and develops independent learning.

Theme 3: Future directions for the middle years program

The final theme to emerge was the future of the middle years program. A year after the beginning of the initial program, support from the community, parents and teachers had increased significantly. The teacher felt this was due to advocacy for gifted education in each of the schools, discussion of what they had learnt by the students when they returned to their schools, and the strong parental support group that developed.

> *I can't believe how much success there has been over the last year. I already have parents ringing me up asking if their kids can be involved next year. That makes you feel like you are doing a really good thing. Next year the school is looking at increasing student numbers. They are also reviewing the long term funding of making the gifted multi-age classroom available more than one day a week to reach more students. I really think we might be on to the start of something here. I just hope that the support for the program can continue, that is just isn't the flavour of the month that is often the case with many educational initiatives. I don't want to get my hopes up too much, but I am really excited about what the future holds for this program. I set out on a challenge to create a*

multi-age, multi-school classroom at the start of the year and now I feel I am well on the way up the mountain! (Reflective Journal, November, 2007)

The teacher began to realise the impact of the program on middle years students' learning, their parents active involvement in the program and the role of the community in supporting it. She noted that the students had developed a new love for learning, and could not wait to come back to school after the holidays to start new environmental projects.

Conclusions

Creating a multi-age, multi-school, middle years program for gifted and talented students is possible. Through determination and a focus on the learner, the teacher (as researcher) was able to create a program that was engaging and a key focus within the community. Its initial success can be attributed to the problem-based and integrative approach that incorporated real problems from the community and allowed students to take control of their learning and knowledge. This type of learning appeared to suit the learning needs of the students and inspired in them a renewed engagement in the learning process. Moreover, they appeared to become independent learners, based on their self-motivation, and valued the opportunity to make real differences to environmental sustainability in the community.

The program also built a sense of community for students, parents and the community. It provided an opportunity for all parties to come together to work on combined projects, valued the learning of all members within the learning community, and enabled parents to take an active role in their child's learning.

This research is limited by the narrative methodology in that it is only the teacher's story of events that occurred during the creation of the program—a personal account of experiences over the year. The research could be strengthened by hearing students', teachers', principals' and community members' beliefs and opinions of the program. It would also be relevant to see if students had developed a different approach to learning within their generalist classrooms. Since some students appeared to have re-engaged with the learning process, it would be important to note if this also occurred in different classroom contexts.

While it was not easy to create this program because of resistance within the school community, the teacher feels the process of providing quality learning experiences for students in the community has begun. Greater understanding of how to establish gifted programs like this will improve access to quality education for all middle years students with gifts and talents. Future research must focus on giving schools examples of effective practice in gifted education for middle years students. Given the recent focus on catering for these students in Queensland, policy makers must also provide practical examples of effective middle years programs for schools. Finally, future research must also provide teachers with the skills necessary to challenge current teaching techniques, so they can employ different approaches to learning for middle years students.

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