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Publication Details

Vialle, W. (2009). Dinosaurs and taxis: educating learners with diverse needs. In J. Chen, S. Moran & H. Gardner (Eds.), Multiple Intelligences Around the World (pp. 131-141). San Francisco: Jossey-Bass.

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RESEARCH ONLINE

Dinosaurs and Taxis: Educating Learners with Diverse Needs

Wilma Vialle, Australia

Bio

After 12 years teaching drama and English in Tasmania and having completed a Master's degree, I travelled to the US to complete a PhD. That was when I first encountered MI theory and it has been part of my professional life ever since, which has included writing one of the first Australian books on MI. I now live in Wollongong, south of Sydney, where I lecture in Educational Psychology and research in gifted education. I teach prospective teachers about MI and I work extensively with practising teachers to incorporate MI in their programs. I am currently researching children's spiritual development.

Abstract

This chapter focuses on the influence of MI theory in special and gifted education in Australia. In both contexts, the MI impact is evident in changes of teachers' attitudes and practices towards these students. In gifted education, MI has provided a means to more broadly define and identify giftedness in students across all economic and cultural groups. It has also influenced the design of curriculum materials for gifted students. In special education, MI teachers have transcended a deficit approach; they have become more positive towards students and recognize a wider range of learning potentials. Through the framework provided by MI theory, teachers have learned to genuinely value and appropriately respond to the diversity of learners in integrated Australian classrooms.

On a bitterly cold, rainy day on the northwest coast of Tasmania, an island south of mainland Australia, the drama teacher consults her timetable and sighs audibly, contemplating the 30 8th grade students who wait for her outside the drama classroom. Her thoughts turn to one student, Peter—whether he will be there and what she can do to ensure that the lesson progresses without anyone ending in tears. Peter is an enigma to her. He is obviously very bright and she is constantly impressed by his creativity, his improvisational skills, and his stage presence. The other students are drawn to him. But he can also be contemptuous of others and cruel in his comments to them. He is one of the most promising students she has taught, but he is failing every subject at school and is constantly sent to the principal's office because of his behavior. Because it is so difficult for him to follow rules,

the other teachers predict that he will leave school early and be habitually unemployed or possibly end up in jail. The drama teacher wonders what the key is to unlock Peter's potential and to steer him onto a more positive pathway.

Several years later in a primary school in regional New South Wales, a teacher is conducting a literacy lesson with her class of six-year-olds. She holds up a flashcard on which is written "Thursday", and draws the children's attention to the "ur" sound. She asks the 24 children if there are other days of the week that also have the 'ur' sound. "Friday," one child responds; another enthusiastically guesses, "Monday." After further deliberations, the answer of "Saturday" is finally given. The teacher congratulates the student and turns to the next flashcard when one of the children, James, says, "Turtle has the 'ur' sound, too." The teacher nods at the child and returns to the flashcards when James again interrupts, stating, "And dinosaur. That ends with 'ur'." The teacher dismisses his observation by sharply retorting, "Yes, but dinosaur doesn't make the 'ur' sound, does it?" and then continues with her lesson. Later in the staffroom, the teacher comments, "James is <u>too</u> smart. He gets us off task all the time."

Richard, a five-year-old, is with his family on a trip to the beach. As they leave the car-park at the end of the day, the following exchange occurs:

Richard [pointing to the Exit sign]: "Look! Exit has the same letters as taxi!" [There was no taxi in sight]

Dad: "Where do you see 'exit'?"

Richard: "On that sign up there."

Dad: "How do you spell 'exit' then?"

Richard: "E-X-I-T."

Dad: "Good job! So where's the taxi?"

Richard: "I just remembered that....There must be one around here somewhere."

Dad: “So how do you spell ‘taxi’?”

Richard: “T-A...uh...X-I. It’s got an ‘A’. Oh, well they’re almost the same.”

Dad: “Pretty smart observation there, kiddo.”

These three scenarios are real examples that encapsulate my experience with multiple intelligences theory over a 20-year period. I was the drama teacher who grappled with the challenge of trying to motivate Peter to apply himself to his schoolwork. The remaining two incidents are extracts from my field notes, made several years later and after I had completed a PhD using MI theory as a framework. The three boys were quite different in how they presented in classrooms: Peter was perceived as a severe behavioral problem with little to redeem him; James was seen as verbally precocious but a time-waster with learning problems; and Richard was welcomed as an intelligent and compliant student. Though different, they had at least one characteristic in common: They were all gifted. In Australia, giftedness is defined as inborn potential. Up to 10% of the student population can be identified as gifted across a number of domains (Gagné, 2003). Under this definition, potential develops into talented performance as a result of catalysts, including appropriate educational interventions. While separated by time, the incidents involving Peter, James, and Richard exemplify the different ways gifted students can be perceived and treated.

While struggling to get through to Peter, I was completing a thesis on gifted students for a Master of Education degree. It occurred to me that Peter may be an underachieving gifted student and I needed to find some way to reverse that underachievement. But I was alone among Peter’s teachers in thinking that he had some identifiable talents. After completing my thesis, I was no closer to understanding what made Peter tick and decided I needed to investigate further.

That decision inevitably led to my travelling to Florida where I studied gifted education. As part of that process, I observed several gifted programs. I was concerned by the

under-representation of culturally diverse children in these programs, which were made up largely of white middle-class students identified through their performance on IQ tests. Consequently, my burning question shifted from “How do I get through to an underachieving gifted kid?” to “How do we identify giftedness in kids who don’t score high on IQ tests?” Searching for an alternative to traditional IQ testing to identify giftedness, I soon encountered MI theory. My PhD dissertation used MI as a framework to structure observations of preschoolers living in low socioeconomic circumstances. Through the adoption of a dynamic assessment approach based on Project Spectrum (Krechevsky, 1991), I gained insights into how children learned from the prompts and scaffolds provided by teachers. Armed with these insights, I returned to Australia to apply what I had learned to some of the educational issues we faced there.

Schooling in Australia

In 2007, there were more than 3.4 million students in 9,612 schools across Australia, with just over 270,000 teaching staff. Education is largely the responsibility of the states and territories, with funding, policy and curricula determined by state governments. Schooling commences at Kindergarten, which children enter at about age five. It is compulsory for all students up to the age of 15 or 16. About 75% of students continue into 11th and 12th grades to complete a Higher School Certificate. Primary schools include Kindergarten to 6th grade in most states and 7th grade in others. Secondary schools go up to 12th grade. Approximately two-thirds of students attend government schools with the other third attending Catholic schools and independent private schools.

The Australian education system, like many others around the world, has been engaged in a seemingly constant process of restructuring over the last two decades. In the 1990s, there was a move toward adopting National Curriculum Statements with clearly

specified learning outcomes for students. These National Curriculum Statements divide the curriculum into eight Key Learning Areas (KLAs)—English; Mathematics; Human Society and its Environment; Science; Technology; the Arts; Languages Other Than English; and Personal Development, Health and Physical Education. Each state has the responsibility to translate these statements into curricula and assessment practices within their own state.

Historically, children with special needs due to intellectual, learning, or physical disabilities were educated separately, either in special schools or in self-contained units within regular schools. Because its administration was relatively quick and economical, the IQ test was used to identify students who required special educational services. It is still used today. The worldwide trend of integrating special and regular education has been adopted in Australia over the last two decades. A large proportion of students with special needs are being enrolled in mainstream classrooms. Some segregated settings remain for students with severe intellectual disabilities; for autistic, deaf, or blind students; and for students with extreme behavioral problems.

Under the philosophy of integration, compulsory units on students with special needs are included in all teacher training programs. Additional financial resources are provided to schools with identified special needs students. Consequently, there is a compelling financial incentive for schools to identify students with intellectual, learning, and physical disabilities, as it enables the hiring of support teachers in the school. Nevertheless, many teachers feel ill-equipped to cope with the range of needs in their classrooms.

The educational needs of gifted students have not been given the same level of attention as other special needs in Australian schools. There is no additional funding for gifted students and very few teacher training programs include more than a single-hour lecture on the educational needs of such students. The number of school counsellors is minimal in Australia. They spend most of their time testing and working with children who

have learning difficulties. They are rarely called upon to identify gifted students or to provide programs for them. The philosophy of integration has also translated into a strong belief on the part of most teacher unions that gifted students should be educated in mainstream classrooms and in neighbourhood schools. Nevertheless, most states do offer some separate classes and schools for identified gifted students. New South Wales, the largest Australian state, has the most extensive provision with Opportunity Classes for gifted students in 5th and 6th grades in some primary schools, and Selective High Schools for gifted secondary students. Entry into these programs is gained by taking a test similar to an IQ test, again because of ease of administration.

In addition to the demands of implementing new curricula based on National Curriculum Statements and responding to a wide range of student needs that may include students who are gifted as well as those with special needs, teachers are constantly bombarded with increasing demands to improve their teaching practices. Newspaper reports frequently extol the shortcomings of the schools while state governments regularly restructure their Departments of Education to increase economic efficiencies. In turn, the Departments of Education constantly evaluate curricula and teacher quality (see, for example, MACQT, 1998; NSW Department of Education and Training, 2003; Ramsey, 2000; Vinson, 2002). Further exacerbating the situation, these increasing demands are rarely accompanied by the resources needed to effect change.

It was in this educational climate of escalating demands and diminishing resources that I returned from the United States and accepted a position as an academic at a university in New South Wales. For the ensuing fifteen years, I have taught pre-service teachers, contributed to the professional development of in-service teachers, and continued my research in the field of gifted education. During this time, I have seen firsthand how MI has captured the imaginations and commitment of a number of Australian teachers and schools.

Elsewhere I have reviewed ways that MI has been applied in Australia, ranging from a television series to workplace training programs (see, for example, Vialle, 1997). In this chapter, I focus on how MI has influenced the practices of gifted education and special education in Australia.

Gifted Education Practices

MI has affected gifted education practices in Australia in two significant ways. First, in broadening the scope of intelligence it has provided a more inclusive model of gifted education, which hitherto had been associated with elitism and narrow IQ-based thinking. Second, MI has been used by teachers to plan curricula that support a range of abilities in their classrooms, and through this planning they have become more aware of the diversity of gifted students.

To understand how MI has influenced the adoption of a more inclusive approach to gifted education, some background on the educational context in Australia is needed. Gifted education has always been in a somewhat precarious position in Australia. Despite two Federal inquiries acknowledging the need for special provisions for gifted students (Senate Employment, Workplace Relations, Small Business and Education References Committee, 2001; Senate Select Committee, 1988), the delivery of appropriate programs has not been systematized in any way and only occurs with the will of committed educators and parents. Australia prides itself on the motto of the “Fair Go” and anything that seems inequitable is frowned upon. This sentiment was most apparent in the 1970s when the Federal Government focused on funding educational programs aimed at overcoming disadvantage, which turned attention away from the needs of gifted learners. In response, a number of Australian educators argued that gifted students were also disadvantaged because the lack of appropriate educational programs prevented them from developing their full potential (Braggett, 1985).

Nevertheless, many educators remained unconvinced and equated gifted education with elitism. The challenge, then, was to convince educators that nurturing gifted students was a matter of equity. MI became important in attaining this aim.

As indicated previously, I was initially drawn to MI theory because it offered a broader conceptualization of intelligence that I thought could be useful for identifying giftedness in children who did not perform well on a standard IQ test. However, a conservative element in gifted education in Australia has remained resistant to any move away from narrow definitions and assessments of giftedness. MI theory was perceived as a threat to gifted education because it challenged the conception of intelligence as IQ. My critics believed this equalled saying that every child was gifted. By contrast, I argued that MI theory was consistent with the international shift to more inclusive and broadened notions of giftedness (Gallagher, 2003; Shore, Cornell, Robinson & Ward, 1991) and countered the claims that gifted programs were elitist by identifying students across all cultural and economic strata.

My research has demonstrated that MI is an effective framework for identifying giftedness in students from disadvantaged groups (Vialle, 1991; 1994a; 1995) and results in broader representation of indigenous, low socioeconomic status, and English as a second language students in gifted programs. As in other countries, the educational attainments of indigenous Australians fall significantly below those of the general population. Relatively few Aboriginal children are selected for gifted programs. If the term “gifted” is applied to an Aboriginal child, the assumption will be that the child is good at sport, usually football. Seeing Aboriginal children through an MI lens has permitted educators to look beyond the stereotype of sporting ability to discover the spatial, oral language, and interpersonal strengths exhibited by many Aboriginal children and to use these in designing educational programs to encourage the development of their talents (Gibson & Vialle, 2007). MI thus

provided a more authentic means for assessing giftedness in children from diverse backgrounds. To illustrate this, I return to Peter, James, and Richard.

Peter was Aboriginal and came from a low socioeconomic background. His everyday language was peppered with grammatical errors. His writing was poor and he struggled with mathematical tasks. At the age of 14, he had a long history of school failure and had developed a negative attitude toward school. In my drama classroom, he was able to "think on his feet", revealing his ability to feel and communicate powerful emotions through drama improvisations. Although I wasn't aware of it at the time, Peter had particular strengths in the personal intelligences and in spatial intelligence that often came to the fore in drama lessons. He was a natural leader who was not permitted to lead because of his general behavior. Peter's interactions with teachers were colored by their focus on his deficits and their perception that he lacked intelligence.

James was born in Papua-New Guinea and had moved to Australia when he was five. The observation recounted at the beginning of this chapter occurred after James had been in Australia for one year. His 1st grade teacher recognized his verbal ability but often failed to capitalize on learning opportunities for him because she thought he was off-task. She indicated to me that he was easily distracted and not achieving at grade level in writing and mathematics. Many of her interactions with him were negative as she instructed him to attend to the specific task she had set.

Richard, by contrast, was a white middle-class child whose positive interactions with his father, as indicated at the beginning of the chapter, were echoed at school. His precociousness was recognized and valued by his teachers and he was later identified for inclusion in a gifted program.

While traditional assessment procedures identified Richard as gifted, they did not identify Peter and James. Further, it is unlikely that either Peter or James would have been

recommended by their teachers for a gifted program because of the disruptive behavior they sometimes exhibited in the classroom. I have argued that gifted education entails the delivery of an appropriate education that recognizes and responds to the individual differences of all students and that can identify the potential in Peter and James as readily as in Richard. In working with teachers, I have used MI as a framework to encourage them to think more broadly about giftedness and the need to respond appropriately to the diverse students they teach.

In the process of designing learning activities for gifted students, a popular approach in Australia is to combine MI with Bloom's taxonomy. Widely used for gifted students in regular Australian classrooms, Bloom's taxonomy was originally created as a hierarchical list of educational objectives ranging from knowledge to evaluation. In gifted education, it has been used to encourage teachers to include sufficient higher-order thinking tasks (analysis, synthesis, and evaluation) for gifted students. According to recent Australian education documents (see, for example, NSW Department of Education and Training, 2003; Ramsey, 2000), quality teachers are those who possess sound knowledge of the interests, abilities, skills, and learning behaviors of the individual students in their class, and are able to adapt their programs and teaching styles to suit those students. In order to do this effectively, teachers need to be able to closely observe students across a range of endeavors. One of the strengths of MI theory is that it provides a manageable framework to guide teachers in this process. By looking at each of the eight intelligences in relation to the six levels of Bloom's taxonomy, for example, teachers can provide a range of activities for the diverse interests and abilities of the students. The teachers who embrace this approach report that they observe their students more closely and look for strengths rather than responding automatically to deficits.

Special Education Practices

MI has also influenced the practice of special education in Australia, again largely through encouraging attitudinal change in teachers. This has entailed looking differently at students with special needs by constructing individual profiles that depict relative strengths and weaknesses rather than simply focusing on deficits. Historically, special education practices have been dominated by a remedial approach where deficits become the driving force for the students' programs. MI theory appeals to special education teachers because it has helped them shift from a deficit view to an understanding that children with learning problems may also possess intellectual strengths (Vialle, 1994b). This has had a liberating effect on their curricula. Teachers are casting aside their remediation techniques in favor of designing activities that both capitalize on the strengths and interests of students and build up students' weaknesses. But the most important part of this shift is not the curriculum but the attitudinal changes in teachers.

Before learning about MI theory, many special education teachers had expressed reservations about an educational system that too readily tests, compares, and labels children. For these teachers, MI theory has reaffirmed their beliefs that children cannot be so easily categorized and that some children are misdiagnosed because of the limited forms of testing used to assess them. The ways in which special education teachers have taken up MI are as varied as one would expect in a country the size of Australia. There is no single approach to using MI in special education contexts. Those I have observed have used the pluralism of the theory to look beyond their students' limitations in linguistic and logical-mathematical activities. Rather than narrowing the curriculum, these teachers have enriched it through providing engaging tasks across all the intelligences. To illustrate this point, I will outline the work of Lorna Parker, the principal of a school for students with special needs. She has

successfully used MI to educate teachers, students, and community members about the learning potential of the special needs students in her school.

Influenced by MI theory, Lorna Parker developed a new model for educating special needs children that required teachers to observe students closely as they undertook activities related to diverse intelligences, rather than literacy and numeracy only. In particular, they were asked to identify the intelligences that were relative strengths or interests for each of the children. The teachers also collected anecdotal information from parents and other teachers. It is mandated special education practice in Australia that all children have an Individual Education Plan tailored to meet their needs. Under Parker's model, this plan started with a statement of what the child could do rather than what they could not do. The focus on strengths then permeated the educational programs devised for the special needs students. The students engaged in enriching experiences in all the Key Learning Areas rather than just drill routines limited to literacy and numeracy.

Drawing on the principles underpinning MI of developing all of the intelligences, Parker's model also helped the students better understand their own profiles of intelligences. The students were asked to think of their brain as a computer with integrated software that Parker dubbed Brainworks. For example, linguistic intelligence was the word processor; logical-mathematical intelligence was a spreadsheet; spatial intelligence was a drawing program; musical intelligence was a synthesiser; bodily-kinesthetic intelligence was the typing program; interpersonal intelligence was the network; intrapersonal intelligence was a PC; and naturalist intelligence was the graphic design elements (Vialle & Perry, 2002). Prior to any class activity, the students would be prompted to "load" that particular piece of software. For example, if students were about to write a story, they would be instructed to turn on their linguistic intelligence software (Vialle & Perry, 2002). In this way, Parker used

the MI framework to communicate to students that they could learn, even if they were not good at everything at school.

Lorna Parker's approach to the education of special needs students is a clear example of how MI theory has been used to modify special education practices in Australia. The focus of her work with special students has been to regard them in a positive light, to encourage their development across all intelligences, and to use their strengths and interests to motivate them in learning. Her approach uses MI as a framework to recognize the diversity in children and to encourage teachers to hold higher expectations of the intellectual capacities of their special needs students.

Conclusion

Educational fads come and go; teachers enthusiastically embrace new ideas and then move on. MI theory, however, has stood the test of time with many Australian teachers. From my observations, it has endured because it fits well with what good teachers do—it provides a structure to value and appropriately respond to the diversity of learners in integrated Australian classrooms.

In the context of gifted education practices in Australia, MI has had two impacts. The first involves the design of curriculum materials for gifted students in regular classroom settings. The second is providing a means to more broadly define and identify giftedness in students across all economic and cultural groups.

In special education settings, MI theory has allowed teachers to move away from focusing on children’s deficits and, instead, look for their relative strengths. Primarily, this has entailed their understanding that children’s intellectual profiles are uneven. As a result, special education teachers with an MI philosophy are more positive toward their students and have higher expectations of their capacity to learn.

My enthusiasm for MI has not diminished over the twenty years that I have been working with it but, obviously, it cannot resolve all the issues confronting educators. In Australia, it has clearly made a small but significant difference to educational practice. Twenty years ago, very few educators had heard of the theory; today, the majority recognize its name. But, more importantly, a small percentage of schools and teachers think about and interact differently with children in a way that respects and responds to their diversity.

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