International perspectives on giftedness: Experimental and cultural observations of IQ and creativity with implications for curriculum and policy design

Maria McCann

School of Education, Flinders University South Australia maria.mccann@flinders.edu.au

This special edition of the IEJ explores the cognitive, cultural, biological, social, emotional, and even spiritual notions of human abilities and the links with very advanced levels of intellectual functioning. In addition, this IEJ Edition’s twenty original papers include practical research findings, guidelines for curriculum design, for curriculum change, and for policy development. This article discusses each author’s contribution within the current context of gifted education and attempts to make links across common themes within the papers, and to highlight areas for future research. Although none of the articles fit neatly into clearly defined categories, for ease of analysis, they will be discussed within broad areas.

Giftedness, creativity, international, experimental, cultural, observation, IQ, advanced intelligence, curriculum, policy design, biological basis

CURRENT NOTIONS OF GIFTEDNESS AND CREATIVITY:
From the biological basis of advanced intelligence to cultural perspectives

In one of the most recent and comprehensive analyses of the state of gifted education in Australia (McCann, 2005a), the field of neuroscientific study on the so-called ‘gifted brain’ and implications for curriculum design, was posited as one of the major future directions.

Michael O’Boyle, formerly of the University of Melbourne, Australia, and currently at Texas Technical University in the United States, has devoted much of his research to identifying aspects of the gifted brain when it is engaged in mathematical processing (O’Boyle et al., 1995). His paper explores the biological basis of such intellectual functioning and he has used behavioural and psychophysiological experiments to collect data. His study published in this edition of the IEJ provides further evidence to the already cited strength of right hemisphere functioning in gifted youth when engaged in mathematical processing. In particular the role of the corpus callosum, the major conduit between left and right hemispheres, has emerged in this study with “heightened interhemispheric communication as unique functional characteristics of the math gifted brain” (p.247). O’Boyle’s research is in keeping with earlier observations of outstandingly gifted mathematicians who showed early and striking spatial abilities, as opposed to verbal/linguistic abilities. Comments from mathematical geniuses themselves, such as Einstein, who claimed that his mathematical thinking was “of visual and some muscular type … conventional words or other signs have to be sought for laboriously only in a second stage …” (in McCann, 2005b, p.6) are in agreement with the neuroscientific findings of researchers such as O’Boyle. This exciting field of research is highly contentious, as it is well documented that pre-natal testosterone enhances right
hemisphere development, which some researchers suggest may help to explain the documented higher numbers of males in programs for mathematically eminent students (Benbow, 1992; Geake, 2000b). Implications for curriculum design have been raised by researchers such as Geake suggesting that the neuroscientific research is sufficient to warrant a qualitatively different mathematics curriculum design for boys who are gifted in mathematics. Certainly, one clear curriculum outcome from studies into the biological basis of intelligence, such as O’Boyle’s, is for teachers to avoid trite interpretations of ‘right brain/left brain’ classrooms and to note from this early research that the brain is far more connected in terms of hemisphericity, particularly for gifted individuals who, according to the findings from functional magnetic resonance imaging (fMRI), show evidence of a thicker corpus callosum. Gender differences have also been identified in the studies to date, with females in general having more neuronal connections and activity in the corpus callosum. As Geake once observed, “to divide a curriculum into left brain and right brain activities is a trite misinterpretation of the research….” (in McCann, 2000). More research is currently underway on the experimental exploration of the biological basis of intelligence and O’Boyle’s contribution is a cornerstone of such work.

Interestingly, locating the site of creative thinking in the brain has proved to be a much more illusive quest, and other papers in this edition of the IEJ have focused on refining tests of creativity and observational instruments.

Although ‘creativity’ is the major theme in the article by Ugur Sak and June Maker, mathematics was also the subject area chosen to explore the divergence and convergence of what they call the “mental forces” children utilise when they are engaged in open and closed mathematical problems. Although the terms ‘convergent’ and ‘divergent’ are often used in opposition, Sak and Maker found a statistically significant correlation between divergent and convergent thinking and between convergent thinking and the components of divergent thinking such as Guilford and Torrance’s original posits of fluency, flexibility, originality and elaboration. The focus of Sak and Maker’s study was on open and closed mathematical problems. The notion of flexible thinking is at the core of this study with the experiments involving the ability to shift cognitive functioning from common applications to the uncommon: “The process of flexible thinking includes both divergent and convergent thinking provided that a problem solver works on multiple solutions, as well as one single solution during the course of problem solving …” (p.252).

Sak and Maker refer to Cropley’s (1992, 1999) studies on creativity which revealed that early researchers tended to separate both types of thinking, convergent and divergent, and considered them as functions of giftedness in different forms, with different instruments needed to measure them.

The focus on mathematics in this paper explored the three key questions:

1. how does student performance on convergent tasks relate to performance on divergent tasks in the mathematics domain?

2. how does student performance on fluency and OFE (originality, flexibility and elaboration) relate to performance on convergent tasks in the mathematics domain?

3. what relationships, if any, exist between problem types?

The DISCOVER Assessment is outlined in Sak and Maker’s article. It is interesting that the analysis showed a strong positive correlation between OFE and convergent scores; fluency scores were also correlated with convergent scores moderately, in a positive direction.

The question is also raised in this paper as to whether creativity is domain specific rather than general across diverse domains. In other words, does creativity in one domain predict creativity in another domain? The authors caution that most recent research on creativity has confirmed that it
appears to be more domain-specific than general. This research has been highlighted recently (in McCann, 2005b) with tests such as the Torrance Tests of Creative Thinking and Klaus Urban’s figural creativity test, which is discussed in the following section, being criticised as attempting to measure creativity in a “knowledge poor” domain.

Klaus Urban is currently the President of the international body, the World Council for Gifted and Talented Children and so it is fitting that this international journal should include an update on the research on his figural test of creativity, the Test of Creative Thinking – Drawing Production (TCT-DP).

This test was designed to mirror what Urban has called a more “holistic” concept of creativity rather than what he refers to as “the mere quantitatively orientated, traditional divergent thinking tests …” (p.272). The details of the test itself are set out in Urban’s paper. What is important to note in this analysis is that this test has been used extensively over the past fifteen years and has received very positive evaluations (Cropley, 2000; Colangelo and Davis, 2003; McCann, 2003, 2005b). It has been compared, in terms of its contribution to the field of testing for creativity, with the famous tests of E. Paul Torrance, the Torrance Tests of Creative Thinking (TTCT) and more recently with the Abbreviated Torrance Test for Adults (ATTA). A recent analysis found a strong correlation between the TCT-DP and scores on the ATTA (McCann, 2005b) which suggests that the figural creative abilities which the TCT-DP measure are very close to those measured by the Torrance tests. Analysis of the TCT-DP results showed that it does not discriminate against subjects in terms of sex, socio-economic status or cultural differences (McCann, 2005b). Urban’s own paper cites studies that support the reliability and stability of the test’s data. Given this, it needs to be noted that many studies have criticised the whole concept of testing for creativity, in what Sternberg (1999) has called a “knowledge poor” domain. Howard Gardner has been critical of creativity tests in general, claiming they attempt a futile measure of, as he termed it, “psychometric creativity”, such that few practising classroom teachers can use them. Recent research has suggested that creativity should always be assessed in domain-specific fields (Han and Marvin, 2002; Kaufman and Baer, 2004). Checklists and inventories of creativity characteristics have been rated very highly in the literature (for example, Kirschenbaum, 1998; Renzulli et al., 1997) as an alternative to the standardised tests such as the TTCT and the TCT-DP. However, Cropley’s extensive evaluation of testing for creativity did conclude that “creativity tests are worth using” (2000, p.78) and he identified Urban’s test as one with particular promise in this relatively young field of research. Urban’s study is cognisant of this research and in his paper contained in this edition, he notes that the TCT-DP should be used in conjunction with other information such as other creativity tests, or teacher/parent ratings of children’s abilities.

Many studies of highly creative individuals have suggested that the very nature of high creativity predisposes the person to a risk of personal maladjustment. This is a much more difficult aspect of creativity to measure or observe.

Alexander Yeung, Alan Chow and Phoebe Chow’s study in this edition of IEJ explores creativity traits in ‘disaffected’ gifted students. Students in this study were identified by teachers to be gifted in non-academic areas, but disaffected and even disruptive, in academic settings. These students were compared with other students in an analysis involving school motivation, academic self-concept, originality in thinking, and imagination. A range of questionnaires and observational measures are outlined in this paper. Interesting cultural issues are also outlined, particularly with the difficulty of assessing creativity, as “this could be even more difficult in Hong Kong, given the highly competitive, segregated, and outcome driven features of the Hong Kong schooling” (p.281). Interestingly, this study concluded, “ … that students found to be disaffected and disruptive did not differ from other students in self-concept and their effort goal orientation … however they scored significantly higher in originality and imagination” (p.286). Implications for
identification of creative students and the design of more appropriate curriculum are outlined in this paper.

Cultural notions of giftedness and creativity are further highlighted in this edition of the IEJ, with a particular focus on the excellent research coming out of New Zealand.

Jill Bevan-Brown’s study of the Maori, the indigenous people of New Zealand, explored three different types of leadership and differing leadership styles which seem to be unique to this culture and their views on giftedness. Her study of notions of creativity and the Maori revealed that while Western traits of originality or difference underpin most concepts of creativity, for the Maori it is quite different. Ownership of the notion of “kotahitanga” which translates as “acting in unity” is central to the Maori view of high creativity.

Findings such as these are similar to Cooper’s (2005) study on the Indigenous Aboriginal populations in Western Australia, where the notion of cultural “oneness, or belonging to the mob” was central to their view of intelligent behaviour. In these indigenous cultures, being ‘different’ or ‘original’ does not necessarily comprise intelligent or creative behaviour. A further extension of the Maori view of giftedness itself was outlined by Bevan-Brown as the “service” component. As she states: “In order to be considered a gifted Maori not only must you be exceptional but you must also use your outstanding skill, ability or quality to help others in some way” (p.152).

This altruistic view of the essence of giftedness has very recently been proposed by researchers such as Sternberg in his WICS (Wisdom, Intelligence, Creativity, Synthesised) model (2004), and his Balance Theory of Wisdom (2003). Both are based on the premise that a definition of giftedness must incorporate providing “a common good … for individuals and institutions” (p.234). Bevan-Brown asserts that at the heart of successfully developing the Maori notions of giftedness and creativity in New Zealand is the need to maintain and nurture the “culturally responsive environment” which is unique to the Maori. Her early research (1996) highlighted skills such as “service to maoridom” and even “cooking ability” as unique cultural markers of giftedness for the Maori. This paper extends her excellent research in this field.

Graeme Miller’s study on perceptions of giftedness within the Cook Island Maori communities is a very insightful and moving tribute to this unique, minority culture within the larger Maori context. Extending the earlier studies of Bevan-Brown (1996, 1999) of characteristics regarded by the Maori as essential to giftedness, Miller provides a detailed insight into giftedness as a construct within the Cook Island Maori on the islands of Aitutaki and Tokoroa. It is interesting to note in Miller’s study, the Maori culture’s most often cited characteristics such as good memory, communication skills, good knowledge of the Bible and carefully reasoned understanding of right and wrong were identified, while other characteristics such as tertiary qualifications were not rated highly at all. In a finding similar to Bevan-Brown’s research, Miller found that the general qualities of leadership emerged as most significant to the Cook Island Maori notions of giftedness, although such qualities were often encapsulated under characteristics such as the ability to “dance … to carve … to fish … skills as an orator, and ability to bring the community together with a sense of unified purpose” (p.242).

The issue of spirituality and giftedness also emerges in this fascinating paper and the difference in viewpoints between the resident Cook Island Maori and those who now live in New Zealand is noted in this extract from an interview: “I think it is interesting that in a sense, Christianity is an enclave within our culture that is not from our culture. The influence of the missionaries has been so great that I, as a Cook Islander in New Zealand, gain my identity through the church. I guess it’s a bit different in the Cook Islands where the main source of a person’s identity is through their island” (p.244). This indigenous view is in keeping with American/Canadian Indian and Australian indigenous beliefs in belonging to the land (as opposed to owning the land) as central to concepts of culture and the development of ability and power within the culture.
Most checklists of giftedness include the characteristic of a sense of humour. Paul Jewell’s article in this edition of the IEJ focuses on the role of humour in cognitive and social development. It is a unique contribution to the field, as few studies have actually analysed the nature of this characteristic. Jewell maintains that actual analysis of humour is possible and involves quite definite states and processes: “It requires cognitive processing, has an impact on the psychological condition (such as release of tension) and has physiological results (such as laughter)” (p.202). Jewell highlights Edward de Bono’s ‘lateral thinking’ as comparable to the ‘paradigm shift’ necessary to humour, which he also indicates is derived from the philosophy of science. The article proposes that the ‘joke’ models important intellectual processes, and according to Jewell is “the essence of creativity”. This is a thoughtful paper, written from a philosopher’s view of giftedness, and there are some excellent jokes to keep the reader’s interest!

SOCIAL AND EMOTIONAL DEVELOPMENT OF GIFTED STUDENTS

Since Gardner’s (1983) *Frames of Mind: The Theory of Multiple Intelligences*, incorporated inter and *intrapersonal* abilities as central to the determination of human intelligence, many studies have explored the links between social and emotional abilities, general intelligence, and giftedness.

Marzieh Amini’s study, presented in this edition of IEJ, used a ‘Student Life Stress Inventory’ and the ‘Coopersmith Self-Esteem Inventory’ to identify stressors in adolescent students (such as unrealistic parental and teacher expectations), and to assess student reactions to such stress. Gifted students in her study showed significantly more cognitive reactions to stressors. Boys had higher scores on frustration levels but lower emotional reactions than those of girls. Her results showed that gifted children in general showed higher self-esteem than those subjects who were not identified as gifted.

Amini’s paper highlights the still conflicting research in this field with some studies indicating giftedness is attended by a robust social and emotional profile, and others suggesting the opposite. It seems that the *degree* of giftedness is the critical issue, with profoundly gifted students possibly much more at risk, than mildly to moderately gifted, of developing stress. More research is needed in this important field of study. Implications for acceleration as an educational option have been raised from a major Australian study (Gross, 2004), which has advocated radical acceleration for profoundly gifted students. Gross’s study found a much higher incidence of social and emotional maladjustment in profoundly gifted Australian students who were denied accelerated learning or had only limited acceleration. Issues such as self-concept and self-esteem do appear to be intrinsically linked with the provision of an education that is appropriate to the degree of giftedness.

The use of ability grouping *in general* has emerged as a further contentious area of study from other papers in this edition of IEJ. Toni Banfield’s Australian study of ability grouping in the mathematics class, explored the links with self-concept and self-esteem in gifted adolescent boys. She found that gifted students have higher mean scores for self-concept and self-esteem and showed evidence of a higher global self-concept when compared with other students at the year 8 level. Her paper highlights the documented lack of research on mathematically gifted students in Australia, which is an issue which Diezmann and Watters (2002) have also been critical. Banfield refers in detail to the contentious Australian debates on what has been called the “big fish, little pond” effect (Gross, 1997; Marsh et al., 1995; Craven and Marsh, 2000), which has debated the effects of selective schooling and ability grouping on students’ self-concept and self-esteem. While Craven and Marsh have cautioned that lowered self-concepts are likely to result from selective ability grouping, Gross has argued that any drop in self-concept is relatively short-term and more the result of gifted students finally being placed in a challenging educational
environment, more suited to their abilities. In general Banfield’s study favours special grouping for gifted adolescent boys, although she cautions that more research is needed on this issue.

Appropriate educational environments can rarely be debated without reference to appropriate training of teachers, teacher characteristics, and the relationship patterns between students and teachers. John Kesner’s paper in this edition of IEJ explored gifted students’ relationship with their teachers. His study found that gifted students have a more positive relationship with their teachers than students who are not identified as gifted: “The hypothesis that teachers of gifted students would report a less positive relationship than teachers of non-gifted students was not supported … Teachers of gifted students reported lower levels of conflict when compared to reports by teachers of non-gifted students” (p.219).

This paper raises some interesting issues such as proposing that gifted students “are even more profoundly affected by the interactions they have with their teachers compared to other students” (p.222). With the weight of research reporting that many gifted individuals found school in general, and relationships with teachers specifically, to be a negative experience (for example, Csikszentmihalyi and Wolfe, 2001), it is clear that more research is needed. From Kesner’s paper, the issue of the degree of giftedness needs further research. It seems his findings are in keeping with the research that gifted students in general tend to have a higher social and emotional profile within school. However, this relatively positive profile seems to change for the highly to profoundly gifted students. Kesner’s article is an important contribution to this field, concluding with the reminder that meeting students’ affective needs within schools is as important as meeting their academic needs.

Kong Yan and Haihui Zhu’s paper also explores the links between general social environment and self-concept, and giftedness and self-concept.

Their study focused on high school and university students who had been selected out and accelerated. This is a very common option for catering for gifted students in China and indeed Kong and Zhu’s definition of “gifted students” in this article is “adolescents who are admitted to colleges at a much lower age than common peers” (p.225). Their study spans a decade of research, comparing results and exploring the links between the academic self-concept of gifted students who participated in the study in 1993 with those who participated in 2003.

Their literature review identifies other studies which suggest lowered self-concept can set in when gifted students are ability-grouped and hence, possibly for the first time, not necessarily the ‘top of the class’. This has already been cited as the ‘big fish, little pond’ effect on self-concept and self-esteem. This study is particularly interesting as it provides a ‘snapshot’ of adolescent adjustment in China over a ten-year period. Indeed for the non-gifted cohort, Kong and Zhu found that the self-concept of students in 1993 was less positive than that of the non-gifted students identified in 2003. Their explanation for this is the improved lifestyle of adolescents in China in 2003, who enjoy “a more colourful life … and with the development of the internet and communication technology, it is easier for them to get access to and connect with the outside world” (p.229).

Interestingly, Kong and Zhu found that a positive self-concept was not found in the gifted cohort studied in 2003. Instead, a slight, although non-significant, negative self-concept was found. To possibly explain this, they suggest that “when the gifted are placed with other exceptional adolescents, they may feel less confident in their academic achievement” (p.230). Although the authors did not cross-reference to the ‘big fish, little pond’ effect, this has been highlighted in the literature and is still a contentious issue of debate within gifted education practice.

Michelle Kornblum’s study of perfectionism in an Australian sample of students raises many issues that warrant further research. Kornblum observes in her paper that no population has been more frequently associated with perfectionism than the gifted; yet the research in this area is still
relatively inconclusive as to whether perfectionism is a ‘normal’ part of being gifted or a condition to be avoided at all costs. Kornblum differentiates between the notions of ‘normal’ and ‘neurotic’ perfectionism.

The hypothesis that gifted students would have higher personal standards than non-gifted students was supported by her study. In addition, gifted students also showed increased parental expectations scores with students in the same year level, suggesting that gifted students may encounter greater parental pressures than the ‘non-gifted’ in order to ‘live up to’ their abilities. Her paper concludes that gifted students were more likely to be perfectionists. The study also found that the higher personal standards identified in the gifted cohort might give them an advantage over their non-gifted peers because of the associations between high personal standards and positive outcomes.

CURRICULUM ISSUES: LINKS WITH ACHIEVEMENT AND UNDERACHIEVEMENT

Kay Gibson and Linda Mitchell’s article explores some critical curriculum components, referred to as the C3 Model, in programs for gifted young children. They examine three early childhood education programs, which presented to them as the most comprehensive approaches to curriculum development: the High Scope, Montessori, and Reggio Emilia models. They also propose that Clark’s Integrative Model (1986), Betts and Kircher’s Autonomous Learner Model (1999) and Smutney et al.’s (1997) Model seem to be the ones most appropriate to instruct pre-K curriculum needs. Gibson and Mitchell claim the following seven critical components should underpin the design of a critical curriculum: philosophy, environment, interpersonal interactions, curriculum, instruction, assessment, and research. They claim that appropriate adherence to each of these factors, as ongoing design and evaluation of appropriate curriculum, is essential and their paper provides a very practical outline of each component. Gibson and Mitchell also indicate that the C3 Model itself can serve as an evaluative tool to analyse existing programs and curriculum which may be appropriate for young gifted learners.

Tracy Heavner’s paper explores what she calls the Integrated Music Curriculum for Gifted Students. She uses the term ‘intradisciplinary’ study of music to describe a study whereby the various strands such as music theory, music history, music literature and music performance are integrated rather than separate studies. This study is in keeping with findings in the field of neuroscience (for example, O’Boyle, 2000; O’Boyle, Benbow and Alexander, 1995; Geake, 2000) highlighting the role of the corpus callosum in the brain of gifted learners, which identify a higher facility for integrated, cross-subject learning in gifted students. The comprehensive musicianship approach outlined by Heavner is also closely related to gestalt psychology in that music is approached as a totality. As Heavener observes, the actual goal of all areas of music is to “develop a total understanding and competency of all areas of music through the unity of … performing, creating, conducting, analytical listening and discussing” (p.172). Heavener’s article also suggests crossing over cultural notions of music, advocating that selections should come from at least three different categories such as Western art, Western music and Eastern African music.

The study by Astrid Heinz has a focus on mathematically gifted students in which the author analysed the presentation of non-routine word problems to children aged 6 to 10 years. A detailed analysis of videotapes of the children’s problem solving processes provided insight into the strategies used. The paper is a fascinating exposé of individual case studies and detailed presentation of individual problem solving stages and procedures. Findings from this study showed that the gifted children excelled in the ability to work systematically, quickly, and to getting an insight into a problem’s mathematical structure much faster than other students. Essentially Heinz’s paper confirmed other research in the field, which highlights gifted children’s ability to quickly and accurately recognise formal structures in mathematics. The gifted students in her study also excelled in the ability to verbalise solutions to problems.
Lesley Henderson’s article presents a model for a moral reasoning strategy, called the PAVE model. The philosophical perspectives underpinning this model are: Principles, Agreements, Virtues and End Consequences. This paper is more than just an exploration of the role of moral reasoning strategies within a curriculum; it is also a paper wherein practical strategies are outlined to teach moral reasoning strategies, often beginning with a moral dilemma. A Community of Inquiry approach is advocated, based largely on the work of Jewell (2000) and underpinned by both Bloom’s Taxonomy of cognitive objectives and Krathwohl’s Taxonomy of Affective Thinking. Henderson makes the important distinction between the notion of advanced moral reasoning and advanced moral development. The necessity to incorporate moral behaviour, or action, as a determining factor is further advocated in her paper by Jewell who asks the question whether “a morally developed person is one who feels strongly about moral issues or understands moral issues or acts ethically when dealing with other people. Human beings are free agents who may or may not choose to act morally” (p.190). This paper combines major models and philosophies, such as the Philosophy for Children and the Community of Inquiry approaches, based soundly on the literature in the field which suggests that gifted students in particular need, “the skills of analysis to sort out and clarify the nature of the real world in order to navigate their course through life” (p.190). This is a paper that will be appreciated by all teachers who wish to incorporate moral reasoning and higher order thinking skills into their curriculum design.

The value of a curriculum design that is appropriate to the abilities of gifted students, particularly those who are underachieving in the regular classroom, is outlined in Heidrun Stoeger and Albert Ziegler’s paper. This research explores the issues of self-regulated learning in the elementary classroom and outlines the design of special programs for mathematically gifted underachievers.

Stoeger and Ziegler examined the central causes of academic underachievement in 36 fourth grade students, highlighting the difficulty in the research of this kind whereby “the lack of a consensus regarding a precise operational diagnosis of underachievement makes it impossible to introduce a standard applicable diagnostic process” (p.262). A training program, developed by Zimmerman et al. (1996), was conducted within the framework of regular classroom instruction of mathematics. Positive training effects were statistically identified in their findings, which in general were that training was deemed suitable as an intervention to reduce underachievement. The authors of this paper indicate that the self-regulated learning training should be beneficial not only for the gifted underachieving students, but for all gifted students.

POLICY DEVELOPMENT: GOVERNMENT SUPPORT AND DIRECTION

Policy is basically the articulation of best practice and intended directions in a field. The necessity to design and implement specific policies to support gifted students has been raised in Australia (McCann, 2005a) as a critical issue, particularly because the eight States and Territories each have their own separate Departments of Education and specific directions. Internationally, and particularly within the Asia-Pacific region, the publication of policy statements provide guidelines for other regions to follow.

Angela Chessman’s article on policy development and practice in the Australian State of New South Wales, is a practical exploration of three key Australian policy documents and how they can have an impact upon the formation of major policy. Probably the most influential of the documents cited is the Australian Senate Enquiry, which was published in 2001 and has (albeit only since 2004) been responsible for a major injection of funding into the field of gifted education in Australia. Similarly to the Senate Enquiry, a major recommendation from Chessman’s paper was that policies need to include a clear definition of giftedness, which will communicate to teachers more accurately the nature of the population of students that is currently under-served in the school system. Chessman also highlights the need for more concerted training of teachers in Australia in the field of gifted education. This is a very practical article and will no
doubt be of great interest to others who are in the process of designing policy in the field of gifted education.

New Zealand and Australia have collaborated for many years, sharing teacher education programs and best practice in terms of policy development in gifted education. David Keen’s comprehensive coverage of gifted education in New Zealand stems from a two-year study he conducted in 68 educational centres and schools across three quite disparate regions of New Zealand. This wide-ranging study was conducted at early childhood centres through to secondary schools and from urban to rural settings.

Keen’s study, entitled Talent in the New Millennium documented issues such as gifted students’ perceptions of school as too easy or boring and anxieties in the school setting, particularly with regard to managing peer relationships and the need for peer recognition and approval. Other issues such as perfectionism and time management are raised as concerns in this most comprehensive study.

It was interesting to note in this paper that many parents of the gifted students in the study, across the full socio-economic spectrum, “maintained that the most important task of the gifted-effective home is quasi-spiritual” (p.215). As Keen further noted, “The spiritual preconditions of giftedness are not quantifiable and, perhaps partly for this reason, in western educational contexts are under-researched” (p.215). This aspect of Keen’s study links it with the research on giftedness since the beginning of the new millennium which indeed does suggest that spiritual intelligence is one of the highest expressions of giftedness. Gardner has not yet proposed it as a formal part of his Theory of Multiple Intelligences (1983; 1997). However, other researchers such as Sisk and Torrance (2001) have maintained that it is the highest intelligence that “integrates all others”. Spiritual precocity, along with the necessity to ‘give back’ one’s gift within the cultural milieu, is prominently advocated in more recent literature as a component of giftedness (Grant, 2002; Sternberg, 2003, 2004).

IN SUMMARY

In conclusion, the papers that follow this link article, all explore experimental and cultural notions of giftedness, and creativity specifically. Each one makes a significant contribution to what is still one of the youngest areas of research and practice within education.

REFERENCES


