Intelligence for the 21st Century: A Discussion of
Intrapersonal and Emotional Intelligences

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Abstract: The purpose of this paper is to critically examine the 'other intelligences' that are currently featured in educational texts and materials, to investigate the tensions between the diverse theories and to evaluate their potential in terms of improving student learning outcomes in the context of formal education. The paper discusses Gardner's personal intelligences and the most prominent theories of emotional intelligence. Gardner's changing perceptions of intrapersonal intelligence; which he nominates as the most important construct for twenty first century learners; are explored, as is the degree of accuracy with which Gardner's definitions are translated into popular texts to guide teachers in the implementation of Multiple Intelligences Theory in their classrooms in order to promote more successful learning outcomes for their students. Theories of emotional intelligence which have arisen as the result of the development of Gardner's interpersonal and intrapersonal intelligence domains are also explored; notably those of Mayer and Savoley and Goldman: as are some of the current texts and articles available to educationalists seeking to promote emotional intelligence in a school context.

Keywords: Intelligence, Gardner, Emotional Intelligence, Intrapersonal Intelligence, Primary Education

Introduction

IN THE LAST twenty years there have been many changes to educational practice. Amongst these is a changing perception of the nature of intelligence (St. Julien, 2000). Research in the area of neuropsychology has provided powerful evidence that the brain comprises different areas of functioning, which lends further weight to theories of intelligence that discuss mental activity in terms of multiple, relatively autonomous functions (Gardner, 2003). The earliest multiple intelligence theories of Thurstone (1938), have been substantially developed (Gardner, 1983b; Sternberg et al., 2000) and have had some impact on educational practice. Gardner's Multiple Intelligences theory (1983b), in particular, has become an influential model that has been used extensively to support student learning in a variety of contexts (Armstrong, 1994; Diaz-Lefebre, 2004; Ellison, 1992; Mc Grath & Noble, 2005; Wahl, 2002), primarily to plan for differentiation in the content and cognitive process of teaching and learning tasks in classrooms.

Multiple Intelligences Theory

Gardner's multiple intelligences theory (Gardner, 1983b, 1993a, 1997, 1999b) comprises eight areas of intelligence: Linguistic/ Word, Mathematical/Logical, Spatial/ Visual, Bodily/Kinaesthetic, Musical, Intrapersonal, Interpersonal and Naturalist. It is distinct from other theories on intelligence in two particular areas. Firstly, it is a cognitive theory based on the most modern research into the functions of

the brain, specifically frontal lobe functions (Bereiter, 2000; Gardner, 2000, 2003; Shephard, 2001; Stuss & Levine, 2002). Reese (1998 p.1-3) explains that the brain comprises 'semi-independent' modules for different functions. The modules are all interconnected and influence one another and other functional areas of the brain reciprocally. Additionally, they are influenced by hormones and 'neuropeptides, many of which are central to emotional states'(Reese, 1998 p 3). He identifies these functional centers as being the physical basis for Gardner's Multiple Intelligence theory. In refuting the theory that intelligence is a single, fixed, uniform phenomenon, Gardner (1983b; 1993a) proposes a much wider and more encompassing view of intelligence that is gradually gaining acceptance amongst researchers of intelligence (Chen, 2004).

Gardner (1983b; 1993a; 1993b; 1999b) proposes that everyone possesses all eight of the intelligences as part of their genetic inheritance. What is significant is that no two people are exactly alike. An intelligence profile developed using multiple intelligences theory (hereafter MI), is as unique as a fingerprint; each individual profile comprising a set of relative strengths and limitations. To add further complexity to the profile, cultural influences and personal experiences constantly impact on the intelligences (Gardner, 1983b, 1993a, 1993b, 1999b), changing both the profile of the individual and the relationship of the intelligences one to another. Like Sternberg,(Sternberg et al., 2000; Sternberg & Williams, 1998), Gardner (1983b; 1993a; 1993b; 1999a; 1999b) stresses the importance now placed on *the potential*

of intelligences. Secondly, Gardner (Gardner, 1983a, 1993a, 1999a; 1999b)developed a set of interdisciplinary criteria by which to determine what may constitute an 'intelligence'. He drew on knowledge in biological science, logical analysis, psychological research and traditional psychology to develop his criteria. This set of criteria constitutes the other distinguishing feature of his work on intelligence as it provides a broader, more encompassing theoretical foundation than that utilized by Cronbach and others (1960) involved in the development of IQ tests; which rely narrowly on verbal/ linguistic and logical/mathematical strengths.

Personal Intelligences

Interpersonal intelligence is intelligence about others. Individuals who have considerable capacity in this intelligence are characterized by abilities to cooperate in groups, be instinctively sensitive to the feelings of others, have good communication skills with a variety of people and naturally make distinctions between people easily. In contrast, intrapersonal intelligence was defined by Gardner as …

> … the development of the internal aspects of a person. The core capacity at work here is access to one's own feeling life – one's range of affects or emotions: the capacity instantly to effect discriminations among these feelings and, eventually to label them, to enmesh them in symbolic codes, to draw upon them as a means of understanding and guiding one's behaviour (Gardner,1993a, p239-240).

Gardner discussed both personal intelligences, the intrapersonal and the interpersonal, for the main part, together, although he did state, 'each form has its characteristic neurological representation and breakdown' (1993a, p.241). He adopted this approach as, in normal environments and conditions; one intelligence is not usually developed independently from the other. So, by discussing these intelligences together, he would avoid both an artificial separation of the two, and also any duplication of material related to both intelligences.

The 'personal intelligences' are, in many ways, significantly different in nature from the other intelligences. Firstly, although there are components specific to each, Gardner viewed them as interweaving to form a 'sense of self'. The other intelligences could stand alone. For example, the development of musical intelligence is less reliant on the development of other intelligences compared to interpersonal intelligence and intrapersonal intelligence which have reciprocal interdependence. The other intelligences were also observed to be less dependent on the influence of cultural norms. This is evidenced in what is considered to be appropriate in the variety of cultural expectations and customs of various societal groups. Maintaining eye contact in specific situations is considered respectful behaviour in some traditions, but not in others. How individuals conduct themselves and understand information about themselves and others as a result of interactions with others depends on the societal and cultural norms.

Despite his concerns regarding the separation of these personal intelligences, Gardner himself has repeatedly done just this as he focused increasingly on the importance of intrapersonal intelligence and the uniqueness of this intelligence domain, excluding any special focus on interpersonal intelligence (Gardner, 1993a, 1993b, 2000c; Noble & Grant, 1997). Interestingly, his colleague Hatch (Hatch, 1997; Hatch & Kornhaber, 2006) has also separated the personal intelligences to concentrate on the development of interpersonal intelligence. There has always existed a 'duality' in the nature of intrapersonal intelligence that is not found in any other intelligence domain (Gardner, 1993a). It is not enough to develop a 'viable model of self'(Gardner 1993a); or a 'working model of self'; (Gardner 1999b), individuals must also be able to use this model effectively in the context of their life choices in order to be regarded as having relative strength in this intelligence domain. Gardner's continued interest in defining and redefining intrapersonal intelligence began in 1993(Gardner, 1993a) and continues into the most recent publication of his work in this area (Moran & Gardner, 2007). The original definition that Gardner (1983b; 1993a) devised was predominated by the impact of emotion, and it was this work that provided the basis for the development of theories of emotional intelligence.

The first indication that Gardner was reflecting and revisiting this definition appeared in the forward to the tenth anniversary edition of 'Frames of Mind' (1993a). Neither the general discussions nor the definitions of the other intelligence domains were altered. The solitary nature of this revision indicates the importance Gardner placed upon this intelligence domain. By 1999, this 'viable model of self' had become a 'working model of self' (Gardner, 1999b) and the stress was firmly placed not only on the development of intrapersonal intelligence itself, but capacity that individuals have to use self knowledge to make suitable choices and appropriate decisions in life. He places strong, accurate intrapersonal intelligence firmly in educational contexts in his discussion of the importance of personal choices in learning. He specifically explores the role of '…human emotions, personality and cognition..' and the relationship between '..the understanding of one's own mind ……(and) personal responsibility for one's own education'(Gardner, 1999b p.51). In this writing

Gardner shows clearly and purposefully the importance of intrapersonal intelligence in educational contexts. It appears that of all the 'forces' that impact on education, there is one over which individuals have some control; the capacity to develop strong, accurate intrapersonal intelligence and the competence to use this self knowledge to interpret, moderate and construct meaning from educational experiences. This is reflected in his most recent and most explicitly detailed definition of intrapersonal intelligence:

> Intrapersonal intelligence is a cognitive capacity that processes self- relevant information. It analyses and provides coherence to abilities, emotions, beliefs, aspirations, bodily sensations and self-related representations in two ways: through increasingly complex understandings of one's self (self awareness) and through increasingly complex orchestrations of aspects of oneself within situations (executive function). Intrapersonal intelligence simplifies the vast amounts of information a person receives or generates by subjectifying it, turning "it is" information into " I want/need" or "for me" information. (Moran & Gardner, 2007 p.21).

This definition contributes significantly to the writing on intrapersonal intelligence. Gardner's original writings have shown subtle, but distinct differences in the way he perceived intrapersonal intelligence. Although he consistently represented the two parts of intrapersonal intelligence; he had not previously indicated any particular means by which strong personal knowledge impacted on the students' capacities to achieve increased academic success. By offering a precise definition of intrapersonal intelligence and clearly defining the relationship between the internal components of intrapersonal intelligence and the external dimensions in new terms, i.e. as the characteristics of executive function, a clearer understanding emerges of the importance of intrapersonal intelligence for students and a process by which educators may promote and assess students' progress in this vital area. Moran and Gardner's (2007) summary of the means by which individuals can achieve success; the hill, the will and the skill; offers some guidelines that may prove to be very powerful in supporting educators in the complex task of facilitating the learning of diverse individuals in a classroom. These deceptively simple guidelines allow educators to focus on developing and assessing three specific areas of student competencies and behaviors that may effectively support student learning.

Interpretations of Personal Intelligences

Whilst it is important to bear in mind that the authors previously discussed were interested in MI theory as a whole, not specifically in personal intelligences; it is the range of definitions and perspectives on the intrapersonal domain that is much more diverse than those of the other intelligences. Publication dates also impact on the understanding of intrapersonal intelligence as they reflect the definitions that Gardner was working through himself in various stages of his thinking regarding this intelligence domain. One of the most influential writers of professional development material for practitioners is Lazear (1999a; 1999b). He focuses extensively on the capacity of strong, accurate intrapersonal intelligence to raise individuals to new consciousness and 'self transcendence' (1999a p.149). He indicates that exercises that focus on self reflection and raises questions relating to the nature of 'self' can develop strength in this intelligence domain. Lazear(1999) does indicate a clear understanding of the importance that Gardner(1993a) has constantly placed on intrapersonal intelligence and the reasons behind this emphasis. He identifies six aspects of self, including metacognition, high order thinking and awareness and expression of different feelings, and he details specific exercises for the successful promotion of each. He continues by describing the attitudes of mind, breath and body that are necessary for clearing and focusing the mind in order to reach untapped potential.

Lazear's practices may indeed improve self knowledge and self awareness, but the focus on serious, individual reflective practices makes them impractical and improbable in regular classrooms. The researchers Lazear has quoted and their nominated 'key contributions' do not exhibit a focus on thinking for teaching and learning; but on promoting deeper understanding of consciousness and intuition. This focal point is reflected in the accompanying text, (D Lazear, 1999b) in which Lazear promotes a 'model' for teaching 'with' intrapersonal intelligence (D. Lazear, 1999). Each of the four stages in the model is illuminated by practices and tasks designed to engage students in thinking about aspects of self. What is problematic, however, is that the suggested activities are superficial in comparison to Lazear's six aspects of intrapersonal intelligence and rely exclusively on students' competencies in literacy and language. Students are involved in many solitary tasks and where they are paired the activities are problematic. Each student in the group is 'engaged' in the same task with a partner and the tasks are not sufficiently open ended to allow for diverse means of individual responses.

The writers at the more practical end of the spectrum suffer from much the same limitations. (*Multiple intelligences: a thematic approach*, 2004). These texts present intrapersonal intelligence with an overly simple definition and list characteristics

of students with intrapersonal intelligence. These characteristics include 'can easily express his/her feelings or opinions', enjoys working on his/her own and likes to think about his/her feelings'. These attributes do not appear to reflect Gardner's idea of a 'viable model of self'. Nor are they necessarily indicative of strong intrapersonal intelligence. Two misconceptions pervaded this and other texts; that students with strong intrapersonal intelligence enjoyed working alone and those tasks designed for individual engagement promoted intrapersonal intelligence. One trait that was identified in these texts as a characteristic of intrapersonal intelligence was the capacity to set and achieve goals. This was also acknowledged by Berman (1995) and other authors (Arnold, 1999; Campbell, 1997; Jasmine, 1995; McKenzie, 2002). This is noteworthy in the light of Gardner's latest definition of intrapersonal intelligence, its relationship to the cognitive skills and behaviors known as 'executive function' and the means by which competency in this intelligence domain may be determined, established and evidenced. The definitions closest to Gardner's explanations of intrapersonal intelligence are consistently found in McGrath & Noble (1995a; 1995b; 1998; 2005), whose most recent publication defines intrapersonal intelligence as

> …the ability to generate a coherent model of oneself, and to use this self – knowledge to plan and direct one's life effectively. It includes skills in self reflection, goal setting, metacognition, emotional literacy and self analysis of one's strengths, limitations behaviour and fears. (H McGrath & Noble, 2005 p. 10).

The activities and suggestions in this text for practitioners are practical and reflect Gardner's own definition of intelligence at the time of publication. McGrath and Noble (2005) avoid the misconceptions found in some of these other texts in that they recognize that solitary tasks are not are not necessarily exclusive in promoting intrapersonal intelligence. They also acknowledge the important role that interaction with others plays in developing intrapersonal intelligence and do not infer that students with strong intrapersonal intelligence prefer to undertake solitary learning tasks.

Emotional Intelligence

Salovey and Mayer's (1990) original writing on emotional intelligence was indicative of the resurgence of interest in social intelligence, historically investigated by theorists such as Thorndike and Cronbach (Cronbach, 1960; Thorndike, 1920; Thorndike & Stein, 1937). They established a comprehensive definition for emotions, describing them

as interdisciplinary 'organized responses' that arise in response to events that are meaningful for the individual. The interdisciplinary nature of these responses was understood to breach the boundaries of seemingly separate psychological subsystems, including those that regulate cognition and motivation, reflecting the authors' interest in the relationship between cognition and emotion (Bryan, undated; J. Mayer, 2004, 2005; J. Mayer & Salovey, 1997; J. Mayer, Salovey, & Caruso, 2000; J. Mayer, Savoley, & Caruso, 2004a; R. E. Mayer, 1996; Salovey & Sluyter, 1997; Savoley & Mayer, 1990). Integrating this notion of emotions with Wechsler's (Wechsler, 1958) definition of intelligence, Salovey and Mayer labeled the set of skills that they hypothesized contributed to the appraisal, regulation and expression of the emotions of self and others as 'emotional intelligence'. This description was later clarified (J. Mayer et al., 2004a) and the emotional intelligence model developed by these theorists was defined as

> The capacity to reason about emotions, and of emotions to enhance thinking. It includes the abilities to accurately perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth.(J. Mayer et al., 2004a p xx)

However , it was in their original writing that Salovey and Mayer (1990) provided a definitive explanation of the relationship between the work of Salovey and Mayer and that of Gardner (Gardner, 1993a).

Salovey and Mayer (1990 p. 189) describe emotional intelligence as a 'part' or 'subset' of Gardner's personal intelligences (1983b). They portray emotional intelligence as 'quite close to one aspect of Gardner's personal intelligences; that of the intrapersonal intelligence, as it was defined in the original edition of *Frames of Mind* (1983b p. 239)

> The core capacity at work here is access to one's own feeling life-one's range of affects or emotions: the capacity instantly to effect discriminations among these feelings and, eventually, to label them, to enmesh them in symbolic codes, to draw upon them as a means of understanding and guiding one's behaviour.

Coupled with interpersonal intelligence, this aspect of intrapersonal intelligence is a particularly important component of emotional intelligence. Savoley and Mayer (1990) acknowledge, however that further aspects of intrapersonal intelligence; awareness of self in other dimensions and the capacity to use the knowledge that is the result of that awareness effect-

ively in life; are not included in their conceptual model of emotional intelligence. In this manner the emotional intelligence model they developed is neither synonymous with intrapersonal intelligence nor identical to Gardner's (1983b) personal intelligence domains. In their later works on emotional intelligence (J. Mayer & Salovey, 1997; J. Mayer, Savoley, & Caruso, 2004; J. Mayer et al., 2004a) consistently acknowledge that their thinking on emotional intelligence was influenced by the psychologists seeking to broaden thinking about intelligence, especially those who developed theories of specific multiple intelligences, including Gardner.

The development of their four branch model (J. Mayer & Salovey, 1997; J. Mayer et al., 2004, 2004a) of emotional intelligence skills and competencies continues to focus exclusively on emotions and still does not include those areas of intrapersonal intelligence that were identified as absent in their original thinking. It is interesting that, like Gardner (1983b) they have developed their own three criteria that qualify emotional intelligence as a general intelligence, but, unlike Gardner, they flatly state that emotional intelligence develops in strength with age. This is a rather interesting criterion for establishing an intelligence, especially from the authors of such a complex and rigorous body of work. It is almost suggesting that emotional intelligence is developed and strengthened by osmosis. Admittedly, it would be rare for any individual to live without human contact or interaction with society, but to conclude that the maturation process of emotional intelligence is determined by chronological age and not the quality of interaction and self reflection that the individual is engaged in is rather unusual. If this intelligence is naturally present in all individuals to a greater or lesser degree, then intrapersonal and emotional intelligences are fundamentally very different, as Gardner (1983b) consistently stresses the *potential* for his multiple intelligences domains, including the intrapersonal intelligence domain, to be strengthened by appropriate interactions and experiences.

However, Salovey and his colleagues are not alone in their interests in emotional intelligence. Other well known theorists include Bar-On (Bar-On, Tranel, Denburg, & Bechara, 2003; Bar On & Parker, 2000) and Goleman (Boyatzis, Goleman, & Rhee, 2000; Goleman, 1995) who both have developed theories of emotional intelligence. Goleman (1995) in particular did much to bring the notion of emotional intelligence to the notice of the general public. However, the success of Goleman's text (1995), was, according to Mayer et al, (J. Mayer et al., 2000), not necessarily a result of the caliber of intellectual content, but the result of societal tensions at that time. They argue that the promotion of an intelligence, that anyone

could have, that gave individuals the potential to overcome difficulties and promote greater success in a variety of learning and workplace contexts came at a time when societal tensions rendered the public most susceptible to this notion (Freedman, undated; J. Mayer et al., 2000 p 93-97). The societal tensions to which they referred are twofold. They discussed the impact of Western thinking that regards emotion and reason as opposing opposites. They also investigated the current issues surrounding elitism and egalitarianism prompted by the publication of *The Bell Curve* (Herrnstein & Murray, 1994).

Despite its public appeal, Goleman's work on emotional intelligence (1995) appears to have attracted a significant degree of academic criticism. Mayer et al (2000 p 102) comment that ' at first it was presented as a journalistic account of our own theory', despite the resultant publication containing significant differences to their work. The most notable of these was the absence of any attempt to develop or explore any relationship between emotion or cognition; a critical focus of the work of Salovey, Mayer and Caruso (2004). Another issue centers around Goleman's (1995) reluctance to decide on a definition for emotional intelligence. Whilst Gardner may have developed and refined the definition of intrapersonal intelligence (Gardner, 1983a, 1993a, 1999b; Moran & Gardner, 2007) over a period of many years and as the result of reflection, Goleman's definition 'snowballed' within the text until the traits included in his final definition were described by Mayer et al as it '……encompasses the entire model of how one operates in the world' (J. Mayer et al., 2000 p101-102). Gardner (Noble & Grant, 1997 p. 24-26) also appears to have some problems with Goleman's model of emotional intelligence

> Interpersonal and intrapersonal intelligences add up to Dan Goleman's emotional intelligence. But I think he goes on to talk about other things like having a certain stance on life My major quibble with his book is that he kind of collapses description and prescription…I think that Dan wants people to be a certain way……(Noble & Grant, 1997, p 24-26).

This comment illustrates that the most significant of the problems that Gardner (Noble & Grant, 1997,p 24-26) has with Goleman's work (1995) is that this model goes beyond the boundaries of Gardner's own understanding of his personal intelligences, which are part of a theory of cognition. It is possible that the prescriptive nature of Goleman's (1995) work actually places boundaries on the potential of individuals to develop these intelligences and that it may even promote a type of homogeneity that is contrary to Gardner's emphasis on the need to find personal meaning and understanding in life.

Bar-On's definition (1997 p14) of emotional intelligence is similar to Goleman's in that it is an extensively inclusive collection of non cognitive traits. He defines emotional intelligence 'as an array of non cognitive capabilities, competencies and skills that influence one's ability to succeed in coping with environmental demands and pressures.'

Using an analysis of his own self reporting scale, the value of which is disputed by others in the field (J. Mayer, Carrochi, & J, undated), he has developed a theory that comprises five categories of competencies. The two that are of interest in this study are, firstly, intrapersonal emotional intelligence, subdivided into emotional self awareness, assertiveness, self-regard, self –actualization and independence. This represents a very different view of intrapersonal intelligence from that defined and redefined by Gardner (1983a; 1993a; 1999b; Moran & Gardner, 2007). There is no link with cognition; instead there are identifiable behaviors that are not necessarily a component of Gardner's intrapersonal intelligence. The other emotional intelligence to be considered is interpersonal emotional intelligence: characterized by empathy, interpersonal relationship and social responsibility. Whilst these two components of Bar-On's emotional intelligence have similar titles to Gardner's 'personal intelligences', they are very different in nature and do not form part of a theory of cognition.

Like Goleman's work, Bar-On's model of emotional intelligence has been understood to be simply a renaming of personality theories and research. Mayer et al (J. Mayer et al., 2000 p103) 'take issue' with theories that are re-labeling all the parts of personality as emotional intelligence and comment that these theories have moved significantly away from their base; which was Gardner's intrapersonal and interpersonal intelligence domains. In doing so, they have widened the gap between intrapersonal and interpersonal intelligences (Gardner, 1983a, 1993a, 1999b; Moran & Gardner, 2007), and theories of emotional intelligence that have no direct relationship to cognition.

There are an abundance of programs designed to promote emotional intelligence, including those labeled 'social intelligence, self science, social competency' (Salovey & Sluyter, 1997 p xiv) and CASEL's social emotional leaning programs (Elias & Arnold, 2006) the discussion of which is beyond the scope of this article. However, two factors are interesting. Firstly, is notable that Graczyk et al (2000) have indicated that quality programs designed to promote students' improved competence in social and emotional areas of development are valuable in developing students' capacities to be more effective '….friends, classmates, siblings, team players, community members. neighbors, spouses and par-

ents.'(Graczyk et al., 2000 p.406). She understands the schools' responsibilities in the provision of these programs as additional to the schools' mission in developing students' academic competencies; not as an integral part of all round development, including cognition. This perspective of emotional intelligence remains congruent with the models of emotional intelligence that separate emotion as an integral part of cognition. Topping et al (Topping, Holmes, & Bremmer, 2000 p.423 - 425) attempt to provide an evaluation of the various interventions associated with the development of emotional intelligence in students requiring behaviour modification strategies. Hoever, they concluded that the available evidence was not conclusive, describing the results of various programs as 'mixed and moderate……moderate and varied….moderate but mixed effectiveness' (Topping et al., 2000p. 424-425), without attempting to assess aspects of cognition.

Secondly, there is little available information relating to programs developed outside America. One non American perspective is provided by Weare (2004). This text, despite the title is does not exactly provide a practical response to the final section of Goleman's text(1995). Instead it appears to rarely mention the work of Gardner (1983a; Gardner, 1993a, 1993b, 1997, 1999b) and the subsequent development of Goleman's work (1995) and instead discusses emotional literacy in terms of positive thinking, well being and mental health, utilizing instead the concept of emotional literacy popularized by Elias (Elias & Weissberg, 2000). A more well balanced approach for educators can be found in Elias and Arnold (2006), albeit an American publication. The contributions to this from authors who hold differing perspectives on emotional intelligence and its relationship with cognition provide a more holistic attempt to explain the tensions and similarities between the theories of emotional intelligence and Gardner's Multiple Intelligences theory (Gardner, 1983b, 1993a, 1999b). Hatch and Kornhaber, (2006 p37-39)in particular, discuss the key issues that separate 'other intelligences'. They contend that it is not sensible to separate emotional intelligence from the broader key competencies associated with Gardner's personal intelligences. They also note that Gardner's definition of intelligence is not necessarily embraced by emotional intelligence theorists and that attempts to measure emotional intelligence contradict the theory of development upon which Gardner's MI theory is based. In doing this they provide educators with some clear indications of the tensions between Gardner's personal intelligences and theories of emotional intelligence.

Conclusion

Gardner's efforts to adequately define intrapersonal intelligence have focused attention on this single component of the personal intelligences (1983b; 1993a; 1999b; 2000c), as have his comments about its 'narrow interpretation' (Noble & Grant, 1997) and his views that strength in this intelligence domain would be an important aspect of success twenty first century learning (1993a; 1993b; 2000c). However, interpersonal intelligence does inform and contribute to accurate intrapersonal intelligence. Gardner's most recent definition of intrapersonal intelligence (Moran & Gardner, 2007) provides a more detailed understanding of this construct. It also clearly explains the relationship between the internal components of intrapersonal intelligence and the external dimensions, evidenced as the cognitive skills and behaviors of executive function. This allows educators to appreciate Gardner's perspective on its importance for learners, to identify a starting point for individualized teaching and learning programs and to add a new dimension to established methods of differentiated planning and learning.

Emotional Intelligence theorists also describe the potential of their theories to impact on students' academic success. It appears that there are two major perspectives; one that examines emotional competencies as an integral part of cognition (J. Mayer et al., 2004a) and others that consider emotional intelligence as a collection of non cognitive attributes (Bar-On et al., 2003; Bar On & Parker, 2000; Goleman, 1995). The latter theorists appear to conclude that emotional competency contributes to more positive experiences and this impacts positively on learning outcomes for students, although Goleman's (1995) work does seem to imply that success is about conforming to the status quo and developing appropriate social responses. The former discuss emotional intelligence in terms of its potential to enhance thinking and intellectual growth, a perspective very close to that of Gardner (Gardner, 1983b, 1993a, 1993b, 1997, 1999b; Moran & Gardner, 2007). While programs to promote emotional intelligence appear popular in educational settings and have been shown to have degrees of success (Graczyk et al., 2000; Topping et al., 2000) in promoting increased student success, perhaps it is time investigate Gardner's most recent thinking about intrapersonal intelligence (Moran & Gardner, 2007).

The most important challenge for educators may be that they need to be very clear about the programs they choose. The programs based on the work of Mayer and colleagues (J. Mayer, 2004, 2005; J. Mayer & Salovey, 1997; J. Mayer et al., 2000; J. Mayer et al., 2004, 2004a; R. E. Mayer, 1996; Salovey & Sluyter, 1997; Savoley & Mayer, 1990) will provide only a portion, a subset (Savoley & Mayer, 1990) of understanding and contribution to development that could be provided by Gardner's personal intelligences (1983). Programs based on Goleman's (1995) work would necessarily include training in what he terms 'emotionally intelligent' ways to behave, implying that successful emotional intelligence depends on individuals' capacities to 'fit in and play the game' irrespective of integrity or personal values. Designs from Bar On's studies ((Bar-On et al., 2003; Bar On & Parker, 2000) may use vocabulary similar to Gardner's (1983) terminology for describing the personal intelligences, but from a very different perspective and with differing intentions as his work separates cognition and emotion. It may be more beneficial to devote time and energy to developing programs based on Gardner's personal intelligences, especially in the light of his recent writing on intrapersonal intelligence ((Moran & Gardner, 2007). A return to Gardner's theory of personal intelligences (Gardner, 1983a, 1993a, 1993b, 1997, 1999b; Moran & Gardner, 2007) particularly that of intrapersonal intelligence could easily be the wisest choice. Strategies and practices designed to support students' development of self knowledge as learners, to improve the cognitive skills and behaviors identified as executive function and to facilitate improved student success could certainly add another dimension to the debates that surround the 'other intelligences'.

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