To all interested delegates!

Hope you all enjoyed the *Generation Next* seminar in Adelaide last Friday - I certainly did!

As referenced during my presentation, I would encourage you to read the attached document: *Middle Years Learners - Engaged, Resilient, Successful*.

Please be in touch if there is any support I can offer you or your school/ organisation in the area of Middle Years, or the transition between primary and secondary education.

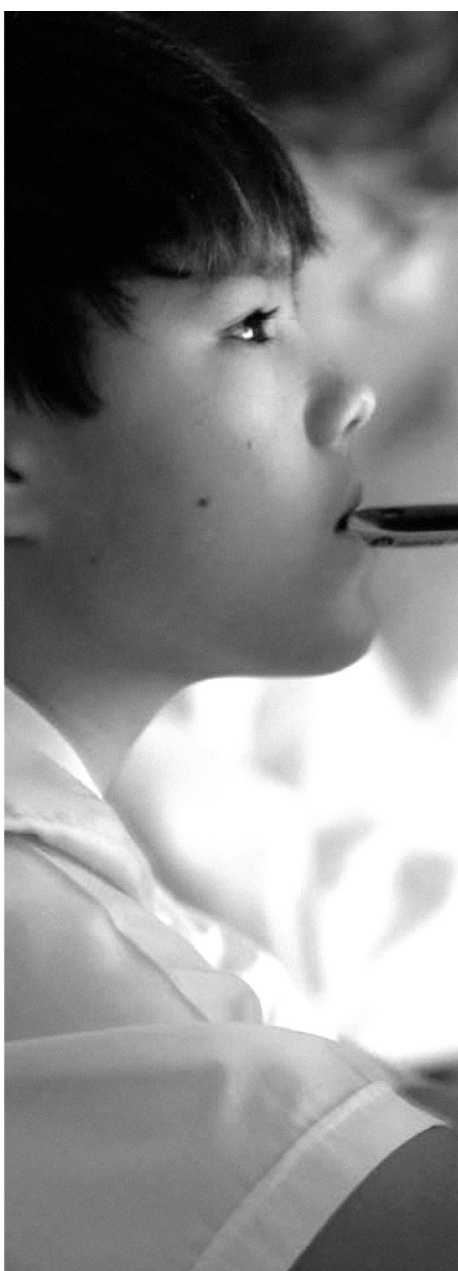Look forward to seeing you at another *Generation Next* seminar in the future!

Cheers,

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Middle Years of Schooling:

A DISCUSSION PAPER

Introduction

This Discussion Paper identifies some important issues about what has become known as the Middle Years of Schooling based on a review of current writing and research from Australia and internationally.

The paper focuses particularly on the educational needs, abilities, learning outcomes and experiences of students in Years 5-9 in NSW public schools and the teaching, learning, curriculum and assessment practices used by teachers of these students.

It is one of a suite of documents dealing with the Middle Years. It is accompanied by:

➔ *Middle Years of Schooling: A Bibliography* which provides information about a selection of resources to support schools in their professional conversations and investigations;

➔ *Middle Years of Schooling: School Self-Assessment Tool;* and

➔ *Middle Years of Schooling: Professional Learning.*

One of the dangers in discussing students in the Middle Years is to forget the wide diversity of their needs, abilities, characteristics and behaviours. In fact there are probably more differences in such a group than there are commonalities. There is no single set of characteristics that describes every teenager or adolescent, every adolescent boy or girl. While generalizations are useful and necessary in discussing any age group we must be vigilant that we are not creating stereotypes. To do so not only denies the individuality of any student and their particular characteristics, it can also easily result in the identification and use of strategies that may well result in less effective educational experiences for the student (Galloway et al., 1998).

This paper was prepared for the NSW Department of Education and Training by Dr David Smith.

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Disclaimer

Purposes of the discussion paper

This discussion paper has been developed to focus and support the work of school leaders, teachers and members of their school communities in relation to Middle Years' schooling. While not attempting to provide a summary of the vast literature dealing with these years the paper identifies some of the most important issues and challenges for schools, teachers and school communities in providing the most effective schooling for students in the Middle Years. It also indicates a range of useful resources that address the identified issues and challenges. A number of these are reviewed in the accompanying annotated bibliography.

The discussion paper should be read in conjunction with the Stages of Learning Strategies:

➜ *Our Young Learners: giving them the best possible start - An education strategy for the Early Years from Kindergarten to Year 4;*

➜ *Our Middle Years' Learners: Engaged, Resilient, Successful; and*

➜ *Our 15-19 Year-Olds - Opportunities and Choice.*

This paper is intended to be used to:

➜ stimulate discussion of issues related to Middle Years' schooling by regions, principals and school executives, teachers, students and members of school communities;

➜ indicate a range of materials that might be used to support such discussion;

➜ challenge individual and groups of teachers, schools and school communities to investigate and gather information about their current practices in relation to the learning, teaching and achievement of middle years students; and

➜ assist regions, teachers, schools and their communities in planning, developing and implementing strategies that respond more effectively to the challenges of Middle Years' schooling and that are aimed at enhancing the learning experiences and outcomes of students in Years 5-9.

Structure of the discussion paper

The paper is divided into five interrelated sections:

➜ **Section 1:** A research-based rationale for focusing on the Middle Years

➜ **Section 2:** The developmental needs and abilities of young adolescents

➜ **Section 3:** Maximising student engagement

➜ **Section 4:** Customising support for effective Middle Years' learning

➜ **Section 5:** Transition

SECTION 1

A research-based rationale for focusing on the Middle Years

Why focus on the Middle Years?

The Middle Years correspond to the developmental period of puberty and early adolescence. Although the exact definition of these key concepts is highly problematic (Pendergast & Bahr, 2005) it has long been acknowledged by both researchers and those teachers who work with these young people that these students have needs and abilities that are different from those of both younger children and older adolescents.

The Middle Years of schooling are a time when students are potentially at a peak in their personal, social and educational development. Unfortunately, however, an increasing body of research using large samples of students both in Australia and overseas demonstrates that **this period** is not only **one in which** this potential is generally not achieved but where previous **achievement levels decline on entry into secondary school**. In brief the research concludes that while there is little change in levels of positive perceptions of school by students in Years 2-5 and after year 9, increasingly **from approximately Years 5 to 9 there is a decrease by students, particularly boys in their:**

➜ **perceived value of school** (Martin, 2006; QSL data, NSW DET); **and**

➜ **positive attitudes towards, and satisfaction with school** (Hill & Russell, 1999, QSL DET);

➜ perceived support from school and levels of respect by teachers (Hill & Russell, 1999, QSL,);

➜ focus on, and interest and engagement in learning (Martin,2006; Hill & Russell, 1999);

➜ academic achievement (Martin, 2006; Hill & Russell,1999; Education Queensland, ND);

➜ out-of-school study and homework management (Martin, 2006); and,

➜ levels of resilience and academic self concept (Martin, 2006; Pendergast et al., 2005; QSL, DET),

while levels of:

➜ **anxiety;**

➜ **avoidance of failure behaviour; and,**

➜ **self sabotage,**

increase (Martin,2006) and, levels of reading, writing, speaking, and listening show little growth (Hill & Russell, 1999; Education Queensland, (c 2004).

Further, longitudinal research by the Australian Council for Educational Research (ACER) has demonstrated that the effects of students' underachieving include:

➜ truancy;

➜ problem behaviours;

➜ negative peer affiliation;

➜ dissatisfaction with school;

➜ disengagement from learning;

➜ poor mental health; and,

➜ problematic post school pathways into jobs or further education and training.

SECTION 1

While it is important to recognise these findings it is more important to understand that **it is possible to develop and implement strategies that can reverse these trends**. The same research cited above also identifies many examples of schools, both individually and in collaboration, that have made fundamental changes to a combination of elements of school culture including school organization, curriculum, and teaching, learning and assessment practices towards preventing such adverse changes occurring. **It is the teachers and the nature of the curriculum, teaching, learning and assessment practices they construct that make the difference**. Indeed, Australian research suggests that teachers may well be responsible for up to 20% of a student's achievement (Martin, 2006; IBP, 2000): **teachers and schools can make significant differences to the academic achievement of Middle Years' students.**

Key factors for identifying the Middle Years are the particular developmental needs and abilities of this cohort. In devising effective responses for Middle Years' schooling it is the developmental needs and capacities of these students that provide the rationale for many suggested changes. However, as Yecke (2005) argues any reform in Middle Years' schooling must focus on enhancing student learning outcomes and realising high levels of academic achievement to provide credentials that have strong currency for future education, training and/or employment.

SECTION 2

The developmental needs, abilities and capacities of young adolescents

The Middle Years is a unique period of growth for young people. With puberty, **between 10-15 years of age, young people develop an increased inner awareness in response to a range of physiological and emotional changes.** Concomitantly they become more aware of and reflective about the wider social environment and their place in it. They begin to understand the problematic and multi perspective constructed nature of many issues and human actions. The associated rapid physical, intellectual, social and emotional changes are complex, interactive and variable. They are seldom happening in concert in either individuals or in peers. Often this results in times of uncertainty, anxiety and confusion.

As part of negotiating this developing inward/outward perspective, adolescents look to peer and adult role models. As teachers we should regard this responsibility very seriously. Not only is this period crucial for the development of significant patterns of learning, thinking and expression but **it is also a period of necessary and significant adult intervention.** Young people left to their own growth processes and experiencing disappointment with the adult world can experience disillusionment and desperation that is too often so tragically and poignantly acted out (Arnold, 2000).

While not the case for all young people, adolescence can be characterised often by rapid swings including:

➔ extremes of feeling and emotion resulting in unusual behaviour;
➔ progressions and regressions in thinking and learning;
➔ swings between self centredness and altruism;
➔ between dependence and independence; and,
➔ between social gregariousness and isolation.

Such swings can also result from pressures caused by increasingly rapid changes in the external globally focused, service oriented and information driven world. Considering that the average age of the NSW teacher workforce is approximately 48 years, **the world of today's adolescent is significantly different to that of their teachers**; 'it is their future not our past'. Some of the most important differences and pressures on today's middle schoolers are:

➔ puberty, sexual maturity and all of the associated physical, hormonal and emotional changes occur much earlier;
➔ a greater transience of marriage and relationships and increased pressure for many young people of dealing with single parent and blended family relationships and often living in more than one family;
➔ the sophisticated attractiveness and potential of television, computer-based media and multi-technologies;
➔ peer pressure, exacerbated by media and commercial advertising specifically focused on the adolescent market;
➔ the large majority of jobs, products and services when these young people become adults are not yet invented;
➔ today's adolescents will have a number of jobs during their working life separated by periods of training/ education and lifestyles that are different from those previously;
➔ most of the jobs will be in services and will require thinking critically and solving problems that have not occurred previously;
➔ living & employment will require high levels of thinking and critical literacy, especially computer-based literacy;
➔ employment will require skills in working with others in teams;
➔ the need to build personal and social resilience in the face of difficult personal, vocational and social challenges;
➔ the need for successful lifelong learning and to respond positively and effectively to constant change.

(after Lillico, 2006)

SECTION 2

Adolescence is the transition from childhood (0-4) to adulthood (15-19 years). While many books have been written about the period of adolescence the **needs of Middle Years' learners have been summarised as a series of developmental tasks** (Hargreaves & Earl, 1990). Begun between the ages of 10-14 years and accomplished by some, more likely girls, by the end of that period, for many young people these tasks extend into and beyond 15-19 years. **Each individual adolescent will complete these tasks in their own way and their own time**. According to Hargreaves and Earl these tasks are physical, intellectual, social, emotional and moral. They include:

→ adjusting to profound personal, physical, emotional and social changes;

→ growing towards independence and autonomy;

→ gaining skills and experience in decision making and learning to take responsibility for choices and decisions;

→ achieving confidence and positive self esteem through success in progressively challenging activities and events;

→ developing a sense of personal, peer and social and cultural identities including a set of personal values and commitments that underpin and shape decisions and actions for living in their, sometimes conflicting, social worlds;

→ adjusting to physical changes with sexual maturity and establishing personal, and social gender identities;

→ gaining acceptance, support and respect from their male and female peers;

→ developing a capacity for and skills in abstract thinking and reflection on both their own development and actions and the world more generally;

→ becoming increasingly aware of the social, political and economic environments in which they live and building skills in successful and critical interaction with these environments;

→ establishing and maintaining positive relationships with significant adults including parents, family and teachers who can support and act as role models; and,

→ continuing to prepare for further schooling and learning, training and a career.

Together, these are a challenging and complex interactive set of developmental tasks. Each of them has important implications for the learning experiences provided both within schools and in contexts outside school (DET Victoria, 2003). **Recent research suggests that some of the most significant developments during adolescence in which schools have undeniable imperatives are intellectual**. These relate to the brain development that occurs during the Middle Years and which likely influences all ideas, beliefs, abilities and behaviour of adolescents.

Intellectual needs

Previous wisdom suggested that brain development had plateau periods where little development took place. It was pointless, therefore, during these periods, to engage students in demanding academic learning (Pendergast & Bahr, 2005). The period of adolescence was seen as one of these 'brain dead' periods. As a result of such beliefs there developed the US 'middle schooling ideology' emphasising meeting the social and emotional needs of adolescents rather than expecting high levels of academic achievement through rigorous and high quality learning tasks (Yecke, 2005).

The latest research, however, demonstrates that this notion of 'brain dead' adolescents could not be further from the truth. In fact, **the period of 10-14 years of age is one of the most prodigious periods of brain development** only rivalled by the 0-4 years period. During 10-14 years of age rapid brain growth occurs. This reaches a peak at about 11years in girls and 12 in boys and attains adult levels from 16-20+ years of age. **The period of adolescence then is a period of brain development in process**. It may be the movements within this process that are responsible for many of the erratic changes often noticed in adolescent behaviour (Nagel in Pendergast & Bahr, 2005).

Adolescence is a particularly malleable period for establishing patterns of behaviour (DET, Victoria, 2006). It is the period in which the large number of dendritic connections between neurons in the brain developed during 0-4 years is gradually reduced as they cease to be necessary to the activities of adolescence. Thus adolescence is a period in which the brain is gradually refined and becomes more specialised in its dendritic connections. More important, the dendrites that are reduced are those associated with activities in which the individual is no longer engaged. Some of this loss is to be expected in the natural transition from the early years to adolescence and the specializations that begin to occur during this process. Other connections are lost, however, because the adolescent is not engaged in activities that require them. It is a case of 'use them or lose them' (Pendergast & Bahr, 2005).

SECTION 2

Thus the types of activities in which adolescents engage, and the environments in which these occur during the Middle Years have a very significant impact on how each individual adolescent brain develops. The types of intellectual, physical and social experiences that schools provide for Middle Years' students is maybe the most important factor in the manner in which each brain develops. In turn this has significant implications for the individual during the 15-19 years period and the adult that each individual will become.

Much of the brain development during adolescence occurs in the frontal lobes. These are one of the most important parts of the brain and are responsible in adults for:

➔ higher order and abstract thinking;

➔ ability to control impulses which lead to socially unacceptable behaviour;

➔ allowing reasoned, logical and rational decision making behaviour;

➔ providing an understanding of the consequences of behaviour, particularly risk taking behaviour;

➔ the capacity for principled moral reasoning; and,

➔ the ability to integrate past knowledge with future goals. (after DET Victoria, 2006; DET NSW, 2005).

Schools and teachers therefore, along with parents and community members have a high level of responsibility to provide the sorts of experiences that will assist and support Middle Years' learners in their developmental journey to become successful adults. The social cost of not responding to this responsibility is considerable.

In the Middle Years, then, young people should be at a peak of intellectual potential and capacity. What they need to realise this potential is learning:

➔ based on a wide variety of challenging tasks with high expectations by themselves and their teachers of strong academic achievement:

➔ that engages the students in deep learning and rigorous analysis;

➔ in subjects that matter both to them personally and to their concerns about the world and which integrate knowledge from relevant subjects (Beane, 2006) ; and,

➔ in learning environments that are supportive, low threat and that respond to the individual needs and abilities of the learners and connect with the worlds outside school (after DET Victoria, 2006; DET NSW, 2005).

Many of the other developmental needs, changes and emerging capacities of adolescents are strongly influenced by these developments within the frontal lobes of the brain.

Physical needs & abilities

Physical growth during adolescence is as rapid as that in infancy with increases in size, strength, flexibility and coordination. Whereas in pre adolescence the task is to develop individual skills related to hands and feet, adolescence is a time to coordinate those single skills into more complex routines of eye/hand and foot/hand coordination. Playground games and participation in sport contribute to the development of these (Krause et al., 2003) and along with drama and dance provide important opportunities for realising embodied knowing (Pendergast & Bahr, 2005).

Girls experience a growth spurt often around 11 years. This is two years generally before boys. Often this means that girls mature up to two years before boys. It is the hands, feet and legs that tend to grow first, often leaving boys in particular, awkward and gangly, and anxious about their body shape. For boys, changes in voice can become reasons for further anxiety and concern (Krause et al., 2003).

High levels of testosterone produce the **need in boys for high levels of varied active learning and physical activity. They also can result in challenges to both peers and adults over issues of power, control and independence**. It is during the Middle Years where such conflict with adults, necessary as part of the journey towards independence, is likely to be highest but usually transient. Conflict can often stem from adolescents misreading emotions and intentions, particularly of adults: seeing anger where there is none intended (DET, Victoria, 2006). Sleep deprivation caused by changes in melatonin levels results in adolescents' preference for going to sleep and waking later. This can also be responsible for irritability and adolescents having less control over emotions and finding it difficult to focus for extended periods on learning tasks (DET, Victoria, 2006; Lillico, 2006).

For girls, the increased weight and body fat and development or lack of development of breasts that accompanies sexual maturity can be causes of anxiety, exacerbated by hormonal changes. These anxieties stem from not having a body that matches their own ideal perception or that promulgated as the ideal through media.

Concern with body image can cause serious issues for adolescent girls and boys. For example, it is suggested that in some studies up to 50% of girls are participating in crash diets possibly leading towards anorexia (Krause et al., 2003). Feelings of not 'fitting in' with peers or with established social images are concerns for adolescents particularly given their increasing intellectual capacity for self reflection and introspection that provide opportunities for adolescents to think deeply about what is happening to them and in comparison with peers. Adolescent egocentrism is often more about making sense of the social, physical and emotional changes that are occurring to them than simply ignoring others.

In terms of body image, it is early maturing muscle bound boys and late maturing generally thin girls who tend to fit the western stereotype of ideal body. Often, these adolescents who usually achieve well academically, are evaluated by peers and teachers as attractive, independent, confident and popular. Alternatively, late maturing boys and early maturing girls who are often more likely to engage in risk taking behaviour with drugs, alcohol and sex are evaluated as attention seeking, anxious and stressed and less popular and lacking self confidence. (Krause et al, 2003). Krause et al., suggest that early maturing girls may achieve more successfully with less delinquent behaviour in single sex girls' schools. In these contexts they may also develop higher levels of resilience and independence.

Social and emotional needs

There are three strongly interrelated concepts that are very important in understanding the socio-emotional developmental tasks of adolescence. These are self efficacy, self esteem and self concept. It is self efficacy that in many respects determines the other two.

*Self efficacy relates to an individual's beliefs about their ability to perform tasks successfully. It can be described as the level of expectation of success a person has in relation to completing a particular task (after Smith & Lovat, 2003). It influences significantly how individuals feel, think and act. Expectations for different tasks will have different levels of self efficacy.

The main factor determining a level of self efficacy is prior demonstrated achievement for the specific task. Strong prior success will generally mean a high level of self efficacy in regard to the particular task. Prior lack of success may produce an immediate negative feeling about a task which can lead to avoidance behaviour and thus further unsuccessful experience: the emotional reaction by a student to a task can determine within 30 seconds whether the student will be successful in the task or not (Krause et al., 2003). **Effective scaffolding of learning to ensure success by students is a very important responsibility for teachers of middle school students.**

High levels of self efficacy are linked to strong senses of enablement, resilience and self power which are very important to adolescents in their managing of the major biological, social and emotional changes taking place. High levels of self efficacy are linked to a strong sense of self in dealing with challenging tasks and therefore academic achievement. Low levels are linked to feelings of powerlessness and often associated with depression, anxiety and helplessness.

During transition from primary to secondary school adolescents often experience a loss of self efficacy, particularly if they have no previous experience of the academic and other tasks expected of them in year 7 and are unsure as to their capacity to complete them successfully. Attempting to prevent such loss is an important rationale for a successful transition program between secondary schools and their linked primary schools (see below).

Levels of self efficacy are strongly linked to both levels of self esteem and self concept.

* Self concept is the collection of knowledge, ideas and beliefs that we hold about ourself. It is formed from our interactions with our peers and the environment and feedback received from them (Marsh & Hattie, 1996). There is a clear link between self concept and self efficacy: the more success in challenging tasks the likely more positive our self concept and the higher our level of self efficacy.

SECTION 2

Our self concept is also related to the level of our own expectations of success. High ability students, those particularly reflective and introspective, can sometimes establish such high goals and expectations that they never allow themselves to experience or celebrate success. This impacts on self concept and self efficacy and thus levels of self esteem.

Self concept is multidimensional (Marsh & Hattie, 1996). There is a 'general' self concept. This is an overall measure of self confidence and assertiveness in dealing with life tasks. It can be divided into at least three further interrelated dimensions- 'academic' (English, maths, social sciences, arts); 'social' (relationships with parents and peers of same and opposite sex) and 'physical' (dealing with both skills and body image).

Academic self concept is established through comparison of achievement with peers and self expectations within and across subjects (Krause et al., 2003). Generally adolescent girls have been found to have a less positive physical self concept than boys, often because of concerns with body image. **Academic and non academic self concepts are strongly related**. Students who are socially accepted generally perform well academically possibly because they can be more focused on academic work because of less concern with needs associated with belonging and identity.

School context may be an important factor in the development of self concept, particularly for middle schoolers. **'Big fish/little pond' to 'little fish /big pond' is now an accepted metaphor for the experience of students moving from primary to secondary school (Marsh et al., 2000)**. The result of this transition for students generally is a decrease in both self concept and levels of self esteem. However, students placed in lower streams may have more positive perceptions of academic self concept than those in the higher streams, even if the latter are very able students. Those students enrolling in selective secondary schools have the tension between having been successful in gaining entry to a very competitive and academic school and very demanding comparison with peers, made more difficult with high self expectations (Krause, 2003).

* Self esteem- while self concept relates to the image that we hold of ourselves, **self esteem is a measure of how we feel about that image, particularly in comparison with peers and with both our own ideals and those expressed by family and other external agencies** such as the media. Promoting high levels of self esteem in young adolescents not only supports them in their achievement of the developmental tasks but is a remedy for personal and social problems. High levels of self esteem are built by challenging students with tasks that they believe they cannot accomplish successfully and, through careful scaffolding and support, ensuring their success. Such tasks should involve risk taking that is not only a characteristic of adolescence but a necessary experience of achieving adolescent developmental tasks towards adulthood. It is much better if such risk taking occurs in carefully scaffolded and supported learning environments rather than unsupervised ones in which the consequences could be life threatening. Successes in tasks to build self esteem also build levels of self efficacy which in turn is important for developing resilience.

There are strong direct links between levels of self esteem and academic achievement in school years 5 to 9 which in turn are related to self concept (OECD, 2002). High levels of self esteem in adolescents are associated with:

→ high levels of academic achievement and thus increased self efficacy;
→ increased academic competence;
→ decreased absenteeism and truancy;
→ decreased inappropriate risk taking with alcohol, drugs and sex;
→ low levels of anxiety, depression, suicide and eating disorders;
→ low levels of crime and violence; and,
→ high participation in sporting and social activities.

(after Krause et al, 2003)

Thus, **there are very strong implications for schools and teachers of Middle Years' students to develop well scaffolded academic and other activities to deliberately build self esteem and self efficacy**. In fact, **self esteem may be the most important correlate with academic success in the Middle Years**. It is very important in identity building during adolescence.

SECTION 2

The social tasks of adolescence relate to peers and to wider social issues and the relationship of the adolescent to those. **The primary social task is to develop a number of congruent identities:** knowing who you are and how you fit into the many cultural contexts of your life and laying foundations for adulthood.

Identity building is concerned with developing a coherent internal self-structure that organises our beliefs, abilities, needs and self-perceptions. **It is in the Middle Years where this identity building begins and is most intense** (Krause et al., 2003). A healthy identity is dynamic, flexible and open to change with elements added and taken away as development takes place. A less healthy identity is often characterised by role confusion, where adolescents are unsure and anxious about some or all of the roles they have to play in life. This can be the result of tensions between roles or an inability to adapt to different roles.

Strong appropriate role modelling by significant adults is very important. Strong modelling by significant adults is essential because one of the tendencies in the Middle Years is to look towards peers rather than adults for their role models (Long.K, 2006). Role modelling by elders becomes particularly important for students from ethnic, racial and cultural minority groups. Such role modelling relates as much to academic learning as it does to social interaction.

Developing a role identity is a long term task and there is likely to be some confusion in role identity, particularly during early adolescence. However, confusion into later adolescence is cause for some concern.

Other needs such as that of belonging and acceptance by and affiliation with peers interact with the task of developing identity. Family, peer expectations and media may impact on role confusion particularly if expectations and norms are not clearly defined or where the norms for one role conflict with those of another. Similarly the need to become an independent individual may conflict with peer group and school norms. Having to deal with experiences of physical, emotional and psychological bullying or harassment by peers may also be part of role conflict and developing identity (Galloway et al., 1998). Role conflict may be particularly significant for adolescents whose home, ethnic, cultural or racial backgrounds and norms are different from those of other social contexts, such as their school. Such students may require special support to keep them engaged with school and learning.

The use of narrative, both the study of author written stories as well as writing their own stories is an important strategy in building identity with adolescents (Ewing, 2006). Stories can provide a range of ideas and possible actions and reactions to real and imagined situations as well as characters that can form the basis for role modelling. Stories, supported by role play and drama activities can also be avenues to confront moral dilemmas and explore different belief systems, as well as stimulating imagination and creativity.

Further, there is clear evidence from a US Presidential Committee that engagement in arts-based activities (drama, music, dance, visual arts etc) employing imagination and creativity do not only have the capacity to transform learning environments they also **increase student learning outcomes across all subjects** (Fiske, 1999 in Hatton & Anderson, 2004). Such activities do not only have the capacity for deep engagement in challenging intellectual tasks, they also are characterised by high levels of physical activity so necessary to effective Middle Years' schooling.

Moral needs

The most important moral need of young adolescents is to explore a range of value systems and the behaviour these construct towards developing their own coherent set of personal beliefs, appropriate within Australian society and that will shape their ideas, values and actions into adulthood. Achieving this successfully requires the development of abstract principle-based thinking and the ability to locate oneself in another's shoes: to move from egocentric to other centred, potentially possible because of developments in the frontal lobes of the brain. As part of developing their own belief system they will need to confront and deal with the conflict of espoused values and behaviour that is not congruent with the values espoused as well as disillusionment with parts of the adult world.

An essential strategy for supporting adolescents to achieve these moral tasks is to provide deliberate programs of values clarification: using authentic situations and relationships to engage students in thinking deeply about alternative actions and their consequences based on different belief systems and value frameworks. The Ministerial Statement 'Values in NSW public schools' (2004) identifies the core values that could form the basis of such value clarification programs. The use of role play, drama, dance, creative arts and physical action are again important vehicles for students to explore value-based actions (Hatton & Anderson, 2004; Cusworth & Simons, 2000).

SECTION 2

Incidents and conflicts that arise between students and students and teachers in classrooms and other school and social contexts can form the basis for very effective value clarification learning experiences, as can strategies such as class meetings, student courts, mock trials and Student Representative Councils (SRCs). They are also important opportunities to assist adolescents to achieve their moral development tasks.

Implications for schools & teachers

While it is impossible to ensure that all adolescents in NSW public schools make the journey through the Middle Years without significant difficulties, there are important implications for schools and teachers from the discussion of the developmental needs and capacities of young adolescents (Pendergast & Bahr, 2005; Krause et al., 2003; OECD, 2002 & Victorian DET, 2006; Education Queensland, 2004). Implementing strategies that not only respond to these but also support Middle Years' learners to achieve the developmental tasks as easily as possible are imperative to ensuring healthy, well adjusted and confident young people and strong academic learning outcomes in the Middle Years. Such implications include:

➔ teachers and parents with well developed understandings of adolescence, adolescent developmental needs, tasks and capacities and the issues likely to emerge during this period of life;

➔ programs in both single sex and mixed groups to help students in the middle school years understand the changes that are occurring within and to them and to develop high levels of self awareness and understanding of their responses to these changes;

➔ a school curriculum of rich multilayered open ended learning tasks that, include multiple perspectives; provide for individual differences in learning style and cognitive processing; and are based on deep learning about topics that are connected to the personal lives of students and are significant in the worlds external to school;

➔ the critical analysis of a wide range of written, symbolic and digital texts that are both informational and imaginative, present multiple perspectives, challenge stereotypes and deal with themes, characters and issues that are significant and relevant to the developmental tasks of adolescence;

➔ teaching based on high but achievable expectations where expected outcomes, strategies to achieve tasks and criteria for the assessment of the quality of learning are clearly and explicitly provided to and understood by learners;

➔ teaching that includes strong modelling and scaffolding of the knowledge and skills necessary to complete learning tasks, with increasing opportunities for student decisions about learning and reflection on learning towards students becoming independent and self regulating learners;

➔ schools in which a variety of male and female role models are available from both within the school and its community and where relationships are based on dignity and mutual respect and trust;

➔ experiences designed to assist young adolescents to achieve their developmental tasks in environments that are safe, secure, low threat and supportive, designed to build self esteem and risk taking and where rules, norms and consequences are negotiated with and understood by students and applied fairly and consistently;

➔ a structure and organization of schooling that is flexible in timetabling, in student groupings and in the use of space and resources; and,

➔ learning spaces that are attractive and intellectually rich and stimulating, that include colourful metacognitive scaffolding rubrics and statements of positive learning affirmations and that provide opportunities for sensorimotor experiences including the use of music and art-based activities during learning.

SECTION 3

Maximising student engagement

Student engagement

One of the key issues for Middle Years' students is the high potential for disengagement from their school and learning and from family and other significant adults (ACSA, 1996). While such disengagement can begin earlier than school year 5, particularly with boys, it appears to be particularly present between year 6 and year 7.

Any definition of 'student engagement' and thus any strategies to increase learning engagement are problematic and highly contextualised. However, generally, as students progress through school they become less interested in school and less motivated to learn (Martin, 2006; Galton, 2000; Galton et al., 1999; Hill & Russell, 1999; QSL, NSW DET). More importantly, their attribution for academic success changes. During school years K-4 students believe that it is effort that determines success and greater effort will result in greater achievement. By the beginning of the Middle Years, and for many lower SES students possibly sooner, however, many students, particularly boys, have determined that academic success depends on ability and they perceive that they do not have the ability to succeed (after Krause, 2003). This results in increased anxiety and low motivation and avoidance behaviour.

Poor motivation is one of the most important factors in decreased engagement and lower academic achievement during adolescence. Motivation and engagement are often increased when learning tasks are active, directly related to the concerns of students, connected to contexts beyond the school and provide for depth study guided by some degree of student direction (DET, Victoria, 2006).

While there are no simple recipes to ensure the engagement of all Middle Years' students, research and experience suggest that the following five principles seem essential for effective student engagement:

Relationships

Effective relationships between teachers and Middle Years' students are central to student management and successful teaching and learning. In addition, the importance of being able to form effective relationships with peers and other significant adults has already been identified as one of the most important development tasks for middle school young people. **Relationships** with teachers are some of the most important. These **must be based on mutual respect, dignity and trust**. These relationship qualities are essential for young adolescents to continue to engage with classroom learning (DET Victoria, 1999). It is the teacher who can:

➔ act as non judgemental listener;
➔ respect the hopes, dreams, fears and aspirations of students;
➔ maintain a safe, secure, low threat and supportive classroom environment;
➔ be firm but fair and consistent in their management of students;
➔ have high expectations of students and their work;
➔ provide support and advice in a friendly but professional manner;
➔ show personal professional interest in the student as an individual; and,
➔ share in common interests,

who is most likely to be able to keep students engaged.

At the basis of any effective relationship between teacher and students there must be a fundamental belief by the teacher that all students are capable of making progress (DET Victoria, 1999; Galloway et al., 1998). This is even more important considering that, as already noted, many students come to believe they are less academically capable after transition to secondary school. These teacher beliefs must then be translated into high expectations for student success and the relentless determination by teachers to persist with and support those who are not achieving to their capacity using learning practices designed to meet individual student needs, interests and abilities (Galloway et al., 1998).

SECTION 3

Relevance

There has been much discussion concerning 'relevance'. Many people consider that relevance results from focusing teaching on current events. While partly true, relevance for Middle Years' students appears to include two major factors. The first, and possibly most important factor is **engaging students as co-participants in their learning**, in an increasing range of teaching, learning and assessment decisions (Pendergast & Bahr, 2005; DET Victoria, 2006; Boomer et al., 1992). Such engagement does not occur naturally and students need to be scaffolded and supported to develop skills in making decisions, taking responsibility and dealing with consequences: all aspects of the developmental tasks of adolescence. **It is the ownership of their learning and taking responsibility for decisions about their learning and its assessment that appears to be central to encouraging student engagement.**

The second important factor is authenticity in learning tasks or their perceived connectedness to the world outside school: tasks that people engage in outside of school in their working and professional lives. Students presenting to audiences external to the school is part of ensuring authenticity as is community-based learning and service (DET Victoria, 2003). Such tasks relate to the developing inward/outward perspective. They provide opportunities for students to engage in challenging tasks that have meaning to themselves and to their concerns about external world issues. **Such tasks should demand high expectations of students and be based on creative and rigorous analysis of information** and sources. The demand for students to report or perform to an audience beyond the classroom and school, and receive feedback from them, is a further motivation for students to achieve at their highest level.

Rigour

There are at least two senses in which 'rigour' is essential in Middle Years' schooling. In both cases it is the teacher who has major responsibility. The first sense describes the nature of the learning tasks offered to Middle Years' students. Both Australian (eg., ACSA, 1996) and UK (eg., Galloway, 1998) research indicates that **Middle Years' students, particularly those in Years 7 & 8 report that they do not feel intellectually challenged** by the learning tasks provided. **Any learning task**, therefore, offered to Middle Years' students **should be intellectually challenging and demanding of deep and rigorous analysis, using ideas central to the subject matter** and higher order thinking appropriate to the developing capacity of the adolescent brain. Such tasks while **providing opportunities for independent work should strongly emphasise collaborative teamwork, in which roles are clearly defined, role interactions effectively scaffolded and managed within a context of negotiated principles and rules for interactions to ensure safety, security and low risk.**

The second and closely related sense of rigour concerns the quality of work expected by the teacher from the student. **Too often as teachers we are prepared to accept a standard and quality of work that is too low**. Both negotiated criteria to judge the quality of the work and what we as teachers are prepared to accept must be based always on the highest, but achievable expectations, in consideration of the ability of each student and the range of abilities in any class. As Lillico (2006) suggests, **to accept inferior quality work does not serve learners well** either in terms of their achieving their learning potential or preparing them for the world external to school, where inferior quality work is unacceptable. Further, **providing unchallenging and low order learning tasks may actually work to demotivate and disengage students** and to lower levels of self efficacy and self esteem (Galloway et al., 1998).

If these two senses of rigour are employed effectively then opportunities for students to achieve educational outcomes at the level of their potential will be maximised. However, to achieve these it will often mean **that teachers will need to have higher expectations of themselves and their planning, teaching and assessment practices.**

Resilience

Developing high levels of resilience is one of the most important developmental tasks for young people and is strongly associated with academic achievement and self esteem (Krause et al., 2003). Evidence suggests that student resilience levels decline from Year 5 to Year 9 possibly because of the experience of transition and a greater awareness of their perceived limitations of their academic ability (Pendergast et al., 2005).

SECTION 3

Resilience may be defined as a personal factor affecting a student's ability and willingness to maintain intelligent engagement with uncertainties (Pendergast et al., 2005). **Resilience involves attitudes, thought patterns and strategies that motivate a young person, in the face of challenge, frustration, anxiety and loss of self esteem, even failure, to not feel defeated but to be prepared to try again** after learning from the experience and possibly modifying decisions and actions. High levels of resilience include high levels of, academic and communicative self-efficacy (see above), a willingness to engage with peers and knowledge of metacognitive strategies for learning and problem solving (after Pendergast et al., 2005).

Generally, students who belong to higher socio-economic status families where family support is high and levels of academic achievement and attitudes towards school are strongly positive will have high levels of resilience. However, this is not always so.

Classroom factors impacting on the development of resilience include:

➔ the quantity and quality of teacher/child interactions;

➔ the amount of focused learning time;

➔ opportunities for goal setting and self regulation and monitoring of learning; and,

➔ levels of self esteem (Krause et al., 2003).

Generally **students who have frequent positive interactions with teachers are likely to build strong resilience.** In addition, those teachers who:

➔ organise and maintain effective learning time;

➔ provide opportunities to students for decision making about their learning; and,

➔ assist students to develop metacognitive skills towards being able to self regulate, monitor and reflect on their learning successfully, are likely to establish classroom contexts that are conducive to developing high levels of resilience in their students.

A number of possible interventions by teachers to build resilience include:

➔ collaborative approaches to assist academic work between teacher, family and student;

➔ supporting a student to take an active successful part in academic learning and school activities rather than permitting them to practise avoidance behaviour;

➔ having students participate in effectively structured group/team work where team roles, rules and responsibilities are clearly defined;

➔ implementing strategies to assist students to understand their thinking, attitudes and actions towards academic work, school and particularly their response to challenges and difficulties;

➔ assisting a student to generate alternative strategies to solve problems and overcome barriers;

➔ providing scaffolded opportunities for students to retrain/reinterpret their self concept and levels of self esteem in more positive ways, particularly by building academic self efficacy;

➔ supporting students to increasingly take charge of their own life and assisting them to make positive decisions;

➔ reinforcing students' accomplishments and assisting them to recognise and celebrate their successes; and,

➔ helping them to accept that it is perfectly reasonable to look for and accept others' support in dealing with issues and challenges (after Krause et al., 2003).

Levels of resilience are impacted by factors other than family and socio-economic status. For example, it has been noted by Munns (1998) that Australian Aboriginal students often have lower levels of resilience than non- Aboriginal students. Apart from poverty, that is the experience of the majority of Aboriginal students, factors such as the historical problematic relationship between Aboriginal people and western European-based institutions such as schools are also significant. Experiences of oppression by these institutions and the concept of 'shame' and the need to 'save face' mean that many of the factors contributing to high levels of resilience (eg. high levels of academic achievement and positive attitudes towards school), often because of inappropriate curriculum and pedagogy, are not present (Munns, 1998).

SECTION 3

Responsibility

One of the most important developmental tasks of adolescence is learning to take responsibility for decisions and actions, especially the consequences, particularly if the decisions or actions were not 'good' or appropriate. As already noted, opportunities for students to be engaged in decision making and scaffolded to build necessary decision making skills are important strategies to assist adolescents to achieve this developmental task. In addition, any student management and welfare programs should also include similar opportunities for student decision making and reflection on their actions within the wider contexts of the school.

Another key issue is developing strategies to assist students to reflect on their learning, the decisions they have made and their consequences. The PEEL project begun in Victoria and which has been implemented for more than 20 years in hundreds of schools in Australia and internationally provides hundreds of rubrics, proformas and strategies for teachers and students to reflect on many aspects of and strategies for learning. One of the major aims of PEEL is to support students to become independent and self regulating learners (Mitchell, Mitchell & McKinnon, 2001; Mitchell, Loughran & Mitchell, 2001).

SECTION 4

Customising support for effective Middle Years' learning

From all of the above discussion, it is clear that every Middle Years' learner is unique in terms of stage of development reached, achievement of the developmental tasks and abilities, skills, interests and learning and processing style. While every learner is unique, the nature of the changes during adolescence, the dynamic manner in which these occur and their impact results in individual differences that are arguably greater and less stable than during K-4 or 15-19 years.

Previously, it may have been assumed by many teachers that students had more in common in their backgrounds than they had differences. Such beliefs may have been more implicit than explicit. They were manifested, however, in teaching practices that viewed the students as a largely uniform class group rather than developing teaching strategies and learning groups that explicitly acknowledge the individual differences of students. **Today, however, the experiences and backgrounds of learners are so different that the need for differentiated curriculum and learning strategies is greater than ever before**. The challenge of the effective Middle Years' teacher is to provide learning experiences for the full range of students (Groundwater-Smith, Ewing & Le Cornu, 2003; Galloway et al, 1998). The central concept in rethinking teaching practices to accommodate all students is that of 'customization'.

Alvin Toffler during the 1960s and 1970s identified 'customization' as one of the central principles underpinning social organization and activity in the post-industrial society. This, he argued, was the exact opposite of 'mass production' which was the key principle of the previous industrial age. Public schools, along with other social institutions established during the industrial age society did, and still largely do, reflect in their organizational structure and classroom arrangements notions of mass production. They, like other social institutions, must make the transition from mass production to customisation (Smith & Lovat, 2003).

Customizing support for Middle Years' learners is challenging within the existing physical arrangements of schools and the accumulated pressures of curriculum and assessment and other external factors. However, it is possible within such constraints to be able to move significantly towards providing customized support. **The central principle for achieving customized support is to engage students as co-participants in their learning: to gradually increase their level of responsibility for their own learning.** Strategies to achieve this include:

➔ providing information to students regarding syllabus content and requirements, assessment and testing and outcomes to be achieved;
➔ implementing scaffolded and developmental experiences for students to develop effective decision making skills in relation to learning and assessment and opportunities to practise these both individually and in groups;
➔ explicitly teaching metacognitive strategies including those promoting students' reflection on their learning and achievement; and,
➔ teaching explicit strategies aimed at developing students as self monitoring and self regulating learners, including having high expectations of themselves their behaviour and achievements.

   (Smith & Lovat, 2003; Boomer et al., 1992)

Once students have developed these types of skills they can be given greater responsibility for their own learning and assessment, including that of peer teaching and assessment.

To be able to customize learning and learning support time, resources and learning spaces need to be used in flexible ways. Similarly, learning needs to occur in varied groupings, from individual, through pairs and teams to large groups. **Flexibility of teaching and learning groups and resources, including time, space, teachers, and technology is one of the most important principles of achieving customized support.**

SECTION 4

Technologies, increasingly available in schools are becoming more multiple, varied and powerful as tools for learning. Concomitantly, students are developing strong knowledge and skills in using these. Two year old children already have knowledge about personal computers, DVD players, mobile phones and ATMs. By the Middle Years young people have developed sophisticated and high level knowledge and skills in the use of a wide range of multiple technologies: often levels beyond those of their teachers.

While there are significant differences in the amounts and types of technologies in schools, those available provide strong possibility for providing customized learning support. The increasing range of computer-based technologies and software to support them has high potential to provide programs that explicitly acknowledge students' individual differences and foster learning based on individual interests, needs and abilities.

Available technologies also have the possibility for engaging students together in small and large groups. In addition, learning can increasingly occur in both real and virtual classrooms operating in synchronous and asynchronous time. Indeed the possibility of substantial school directed learning occurring away from school and in virtual classrooms is becoming more possible (Smith & Lovat, 2003). Rapidly developing wireless technology will also increasingly mean that there is no requirement for fixed physical spaces such as computer laboratories.

Enquiring Minds (EM) (http://www.futurelab.org.uk/research/enquiring _minds. htm) provides an excellent example of the ways in which computer-based technologies can be used to support customised learning. A joint project between Microsoft and Futurelab (UK education agencies), EM is an innovative research and development technology-based initiative. It aims to investigate how students learn using technology, apply theories of personal learning and skill and inspire students and teachers towards empowering them to realise their potential as knowledge creators. In particular the project provides opportunities for students to take responsibility for their own learning, conduct research and create knowledge within a rich digital environment.

To achieve these aims EM will:

➔ develop activities and strategies to scaffold student learning and the creation of learning plans and goals;

➔ establish a common vocabulary of learning that can be used by students and teachers to reflect on their learning and decisions;

➔ provide a range of digital learning tools and resources; and,

➔ make available assessment strategies for learning designed to improve the learning skills of students.

EM is based on a formative competency-based model of four key roles for the learner (enquiring, researching, communicating, transforming) and two for the teacher (co-researcher and facilitator of student learning and research within democratic classrooms).

Thus increasingly sophisticated technology provides strong opportunities for teachers, with technical support, to move towards higher levels of customized learning support for Middle Years' learners. In itself, technology and the access to the sophisticated and deep knowledge it potentially offers provides a strong connection to the world of Middle Years' learners outside school and to their interests. The NSW DET Centre for Learning Innovation is undertaking projects similar to those of EM to further the possibilities of using multiple technologies to provide customized learning support.

The Microsoft Partners in Learning project in NSW government schools is working with the Department of Education and Training "to help integrate information and communication technologies into curriculum, support teachers with 21st century skills and knowledge and improve educational outcomes for students".

There is strong evidence both in Australia and internationally that the Middle Years is a period in which student attitudes to school and their academic achievements decline, even though current brain research indicates that this is a period of optimum intellectual potential. Students themselves report that they are not being challenged during the Middle Years of schooling. Although the Middle Years is also the period of adolescence with significant physical, social and emotional changes, research suggests that it is the arrangements for student learning that are much more important in explaining the declines in students' attitudes and achievement.

SECTION 4

The same research, however, indicates that it is possible to reverse these trends through significant system and school-based reform. It is imperative, therefore, that NSW primary and secondary schools examine their current practices to determine whether they are delivering the best possible schooling for Middle Years' students. The nature of the learning experiences that we offer to Middle Years' students has serious consequences for the development of well adjusted young people who can successfully complete the 15-19 years phase and take their place in the world as mature adults and critical and productive members of Australian society.

SECTION 5

Transition

It is the movement of students from Year 6 to Year 7 that has been identified as one of the most critical issues in the Middle Years (Pratt & George, 2005; Pendergast & Bahr, 2005; Anderson et al., 2000; Galton, 1999; Education Queensland; DET Victoria; Galloway et al., 1998; NSW DET; Hargreaves & Earl, 1996).

While this transition coincides with changes caused by adolescence, evidence suggests that it is factors associated with differences in the organization and structure of primary, and particularly secondary, schools that are more important in explaining problems associated with transition than the changes of adolescence.

It is in this transition where **students move from being the oldest leaders with attendant high self esteem and important roles to play in their school to being the youngest student in a larger school with little if any influence or status.** Without well planned and managed strategies to support students during this transition, movement into secondary school can be fraught with high levels of confusion, anxiety, alienation and loss of both personal and social identity. This is particularly so in the early part of the first secondary school year (DET Victoria, 2003). More important, such reactions may well explain the consistent research conclusions of negative changes in attitudes to school and academic work and disengagement from learning from Year 6 to Year 7. If students are not successful in developing new peer networks, establishing effective relationships and using problem solving strategies in this new environment they may well develop mental health problems. **The specific teaching of problem solving and coping skills is a very important element of any transition program.**

It is obviously much easier to manage Year 6 to Year 7 transitions when the number of primary schools linked to a secondary school is limited. Large drawing areas and therefore high numbers of linked primary schools make planning for effective transition much more challenging. This is particularly the case for selective and specialist secondary schools and colleges. The imperative for smooth transitions in these sites, however, is no less. In fact, with the potential for an increased diversity of student abilities, needs and interests in these sites, and a related requirement for potentially even more differentiated curriculum, strategies for effective transition become even more significant.

No matter whether it is a small cluster of secondary and linked schools or a secondary school with a large number of linked schools **the principles for effective integration** are similar. They **centre on building effective relationships between Stage 3 and 4 teachers and, particularly between students**. Research and experience suggest that the following strategies may be useful in realising successful transitions:

➜ discussions and planning between principals and senior executive of linked primary and secondary schools to develop arrangements and policies to support strategies for building relationships between Stage 3 and 4 teachers and students. Discussions would include such things as:

> ➜ identifying Middle Years and transition as strategic priorities made explicit in schools' management and learning plans;

> ➜ evaluating existing information provided to the secondary school from primary teachers and discussing possible modifications;

> ➜ aligning schools' timetables to create possibilities for exchange of staff and students and joint planning and implementation by Stage 3 and 4 teachers;

> ➜ establishing dates for combined professional learning and development;

> ➜ creating time and funding to support Middle Years' initiatives; and,

> ➜ aligning curriculum, pedagogy and assessment practices between primary and secondary schools.

SECTION 5

Such discussions at leadership level are essential to support the following strategies:

→ developing protocols for passing information from Stage 3 to Stage 4 teachers. Protocols and formats will obviously vary with contexts, however, they will generally include:

> → information regarding levels of student academic abilities, particularly in relation to literacy and numeracy but also other KLAs;
> → students' learning needs and styles, abilities, social skills and behaviour, particularly in relation to other students;
> → students' interests and outside-school activities;
> → students' leadership and other roles in Year 6; and,
> → any other pertinent information.

With secondary schools having many primary linked schools the development of such protocols is much more difficult. Some secondary schools, however, have made decisions as to what information is necessary to facilitate smooth transitions. This advice has then been provided to every school from which a Year 7 student will be drawn the following year.

If gaining relevant information using this strategy is not possible, other secondary schools have developed multilayered differentiated tasks to assess students' prior learning during the first term of Year 7. Even such schools, however, can still benefit from engaging with one or more of their primary linked schools in some of the following activities:

→ **creating opportunities for Stage 3 and 4 teachers to engage together in analysis of results of tests such Basic Skills Test, Primary Writing Assessment (PWA), English Language & Literacy Assessment and the Secondary Numeracy Assessment to** identify specific learning needs and comparing students' academic achievement between Year 5 and Years 7&8;

→ **providing time for Stage 3 and 4 teachers to work together regarding primary and secondary curriculum and syllabii, and teaching, learning and assessment practices**, to effect smoother transitions for students;

→ organising time for **Stage 3 and 4 teachers to observe one another's classroom practice and to move towards joint planning and teaching lessons** in Year 6 and Year 7 classrooms;

→ **developing programs in which Year 4, 5 and 6 students engage with Stage 4 students and begin to build 'buddy' and develop peer relationships.** Such programs can include one-off social and sporting days or orientation visits to the secondary schools. However, it is regular longer term engagement in challenging and relevant teaching and learning programs that appears to be most successful in establishing the kinds of relationships that are essential to smooth transitions (Galton, 2000; Galton et al.,1999): **'transition is a process not an event'** (DET, Victoria, 2000). **It is quite possible that relationships between students are the most important factor in successful transitions.** For Year 6 students to know that there are Year 7/8 peers at the secondary school that they already know may be more important in their choice to attend a particular secondary school than any other factor. Such peer oriented programs also provide opportunities to build on the leadership qualities and skills developed by Year 7 students while they were in primary schools.

→ adjusting Year 7 curriculum, teaching, learning and assessment practices and the organization of teachers and students to better meet the needs and characteristics of Middle Years' students. These practices may include:

> → 'home rooms' to reduce student movement;
> → small teaching teams emphasising pastoral care and building relationships;
> → engagement in multilayered open-ended tasks integrating knowledge and skills from a number of subjects; and,
> → strong cross-year peer support programs, particularly in the first half of Year 7.

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